DOCUMENT RESUME

ED 031 028 EC 004 220

By-Lloyd, Glenn T., Ed.

Habilitation through Media.

Tennessee Univ., Knoxville. Coll. of Education.

Spons Agency-Office of Education (DHEW), Washington, D.C.; Rehabilitation Services Administration (DHEW), Washington, D.C.

Pub Date Mar 68

Contract-OEC-2-7-000235-0235

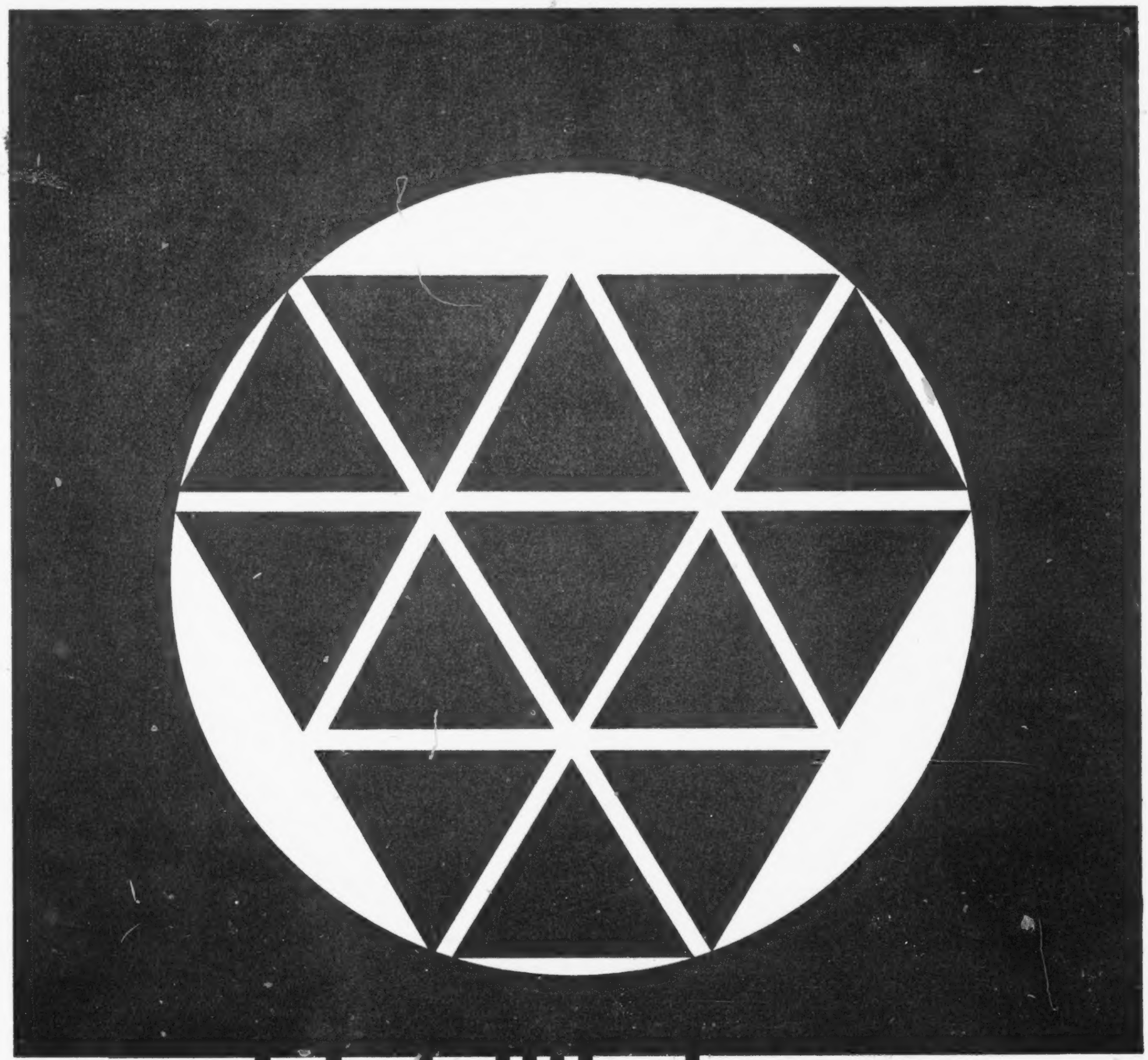
Note-112p.

EDRS Price MF-$0.50 HC-$5.70

Descriptors-*Audiovisual Aids, *Aurally Handicapped, Equipment Evaluation, *Exceptional Child Services, *Multiply Handicapped, Occupational Information, Overhead Projectors, Personal Adjustment, Programed Instruction, Projection Equipment, Rehabilitation Centers, Television, Vocational Counseling, Vocational Education, *Vocational Rehabilitation

Introductory remarks on the multiply handicapped deaf and on media precede an address by Arthur G. Norris on the use of media in the vocational education of the deaf. Also presented are discussions of video technology, programmed instruction, projected materials and equipment, the overhead projector, and special devices and materials. Audiovisual media in a rehabilitation center, implications of media for rehabilitation personnel, and comments on these topics are considered; demonstrations are reported in vocational education or training, personal adjustment, occupational information, and applying for a job. Also included are the following: a committee report on materials evaluation, sources of materials, panel reactions and comments, recommendations from group discussions, a workshop summary, and a roster of planning committee and workshop members. (RJ)

ED031028



Habilitation through Media

Report

University of Tennessee **Knoxville, Tennessee**

EC004220E

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

HABILITATION THROUGH MEDIA

Glenn T. Lloyd, Editor

Proceedings of a conference on utilization of new media in the vocational rehabilitation process with multiply handicapped deaf people. The conference was supported in part through grants by the Rehabilitation Services Administration (Grant No. 412-T-68) and Captioned Films for the Deaf (Grant No. OEC-2-7-000235-0235) to the Department of Special Education and Rehabilitation, College of Education, University of Tennessee, Knoxville.

March 4-7, 1968

PREFACE

DEFINITION OF MULTIPLY HANDICAPPED DEAF

Rehabilitation Services Administration
Department of Health, Education, and Welfare
Washington, D. C.

The handicapping aspects of deafness are omnipresent. All deaf people are affected by them in varying degrees. They are manifested in limitations of communication, academic achievement, social effectiveness, interrelationships, emotional adjustment, and occupational attainment. These are areas of human behavior that yield to appropriate training. Many deaf people compensate so well in all of these areas that their handicap is minimal. They reach a level of functional competence that enables them to meet the demands of daily living so that they are able to move into the stream of society without serious crisis. A very large number, however, are so seriously limited in all or important combinations of these areas that they are unemployed or greatly underemployed, dependent, and maladjusted. These are the multiply handicapped deaf.

The multiply handicapped deaf are very severely handicapped. They may be as much as half of the total deaf population (or the lower 50%). Thus, there may be as many as 100,000 or more deaf men and women who may be considered multiply handicapped. The severity of their handicap is largely a product of the extent of their hearing loss, their age at its onset, the resultant communication deprivation (both sending and receiving), the ways in which their associates and families interact with them, and their own experience (or lack of experience) in learning to cope with their environment.

Important characteristics of the multiply handicapped deaf are:

(1) Communication - The multiply handicapped deaf are all severely limited in communication skills. Their written language is not readily understandable. It is replete with such serious errors in syntax and vocabulary that meaning and intent are very often

obscure. Their reading ability is at such a low level that they are functionally illiterate, probably reading at fourth grade level or less. They do not speak understandably, if at all. Their sign language skills are inadequate. They do not readily understand spoken, written, or signed messages. Such residual sound perception as they may have is nonfunctional for speech reception.

(2) Academic Achievement - The multiply handicapped deaf have not had adequate formal education. Although some may have had years of exposure, they have not derived appropriate benefit for one reason or another such as insufficient motivation, emotional immaturity, illness, or inappropriate teaching methods. Others may not have had opportunities due to family overprotectiveness, illness, emotional problems, migration, family economic difficulties, or other seriously handicapping conditions. These people are naive, unsophisticated in their knowledge and interpretation of the surrounding community, and their reactions to it because they do not have sufficient apperceptive development in comparison to mankind generally and are deficient in the basic tools to acquire it, namely, communication skills. Their achievement levels by standardized tests of educational achievement are at fourth grade level or less. They are not able to benefit appreciably from existing training resources.

(3) Social Effectiveness - The multiply handicapped deaf have deep seated adjustment problems stemming from their inadequate educational experience, from environmental pressures generated by their impairment, and from, more than likely, emotional immaturity. They are unable to interact positively with many kinds of people and situations, including employers, co-workers, family, authorities, and peers. They are indifferent or not knowledgeable about appropriateness in dress, personal hygiene, courtesy, social mores, and similar hallmarks of social effectiveness. They do not manage their own affairs effectively. They may be socially isolated from others, or nearly so.

(4) Secondary Disabilities - Many of the multiply handicapped deaf have other disabilities that affect their learning and achievement. Mental retardation, serious visual impairment, chronic illness imposing limited vitality, skeletal and muscular conditions, and emotional

disturbance are among secondary disabilities that may influence the early formal training of deaf people to the extent that they remain multiply handicapped as adults.

(5) Occupational Attainment and Vocational Adjustment - The multiply handicapped deaf are either unemployed or greatly underemployed. Their employment history may reveal many short term jobs or none at all. They may have records of long term low grade employment that is seriously inconsistent with their true level of intelligence, strength, or other important characteristics. They are without or have few marketable skills as a result of inadequate training or other conditions which have prevailed throughout their lives.

Multiple handicaps in deaf people will yield to intensive, highly specialized, long term training procedures appropriate to their needs.

EDITOR'S NOTE

During the course of the workshop, the term "verbal" has been used a number of times It is not clear what the people using this term meant. It does appear that some confusion might result so the editor has taken the liberty to provide the following footnote.

In its strictest and most accurate sense, the term verbal simply refers to words. Words, of course, constitute the English language and it may be presented in a variety of ways. The most common form of the verbal is speech, but this is merely one form. Printed language and fingerspelled language are additional forms as is writing. Each of these is expressive in nature and, as such, are either oral or visual.

Receptively, the verbal forms depend upon aural and visual channels. For verbal communication to take place, it is necessary that there be oral and aural intactness for speacking-listening communication to occur. Similarly, there must be visual intactness and accurate "physical" reproduction of printed, written, or fingerspelled verbals in order for communication to occur effectively.

(For those who communicate with braille, there must be tactile intactness as well.)

When discussing the use of various media, it is necessary to have a clear understanding of what we mean by "verbal" when used in contrast with visual, auditory, or tactile since verbals may be in any one or all of the three forms. Pictures are not verbal, but are printed. Words, on the other hand, are verbal when in the same printed form.

Verbals are perceived in one or a combination of three fashions. They may be perceived auditorily, visually, or tactilely. It is not appropriate, then, to discriminate or separate "verbal" from mode of presentation and reception.

WORKSHOP PLAN

The workshop was organized in a manner calculated to provide the participants with some background through presentation of several papers in general session and division of the participants into five groups corresponding with the number of demonstration presentations in the various media areas. These media areas were:

A. Video Technology
    Utilization of Television & Video Tape
B. Programmed Instruction & 8mm Films
C. Projected Materials & Equipment
D. Overhead Transparencies
    Production & Utilization
E. Special Devices & Materials

To provide opportunity for each participant to be exposed to all demonstrations, the groups rotated from one demonstration to the next. The purpose, of course, was to permit each participant to become cognizant of all media demonstrated at the workshop.

The second step was to arrange for six laboratory groups, each of which was assigned to a specific area of media. Five groups were assigned to one of the demonstration areas outlined above and the sixth to the task of viewing and working towards a systematic procedure which might be utilized in preview evaluation of available software.

The five laboratory groups assigned to a specific media were to work toward production of software for the media area to which they were assigned in the four areas of:

A. Vocational Education or Training
B. Personal Adjustment
C. Occupational Information
D. Job Application

It was felt that by actually participating in the planning and production process, the participants would be able to discuss and define problem areas, make recommendations, and to suggest guidelines for the production and use of media materials. This, then, became the focal point for the third major division of the workshop, the final group discussions.

In summary, the workshop was planned around three major divisions:

1. Demonstrations of the various media.
2. Development of materials for use with media.
3. Discussion for the purpose of identification of problem areas, recommendations, and suggested guideline.

WELCOMES

Hilton A. Smith, Ph. D.
Vice President for Graduate Studies and Research
The University of Tennessee

It is my great pleasure to bring you greetings from The University of Tennessee, a state university and a land grant college. We are very proud of the fact that we have a great many programs of many sorts. The area of work with the handicapped, specifically with the deaf, is one of the programs of which we are unusually proud. We are happy we can host this meeting for you.

We hope that while you are here you will have the opportunity to look around our campus, to see our many new buildings, and to understand the size and complexity of our University. We are very proud of it. I would like to show each one of you personally all there is to see, but, of course, that would take too much time.

Now really, this is all that I should say. We do welcome you here. We do want you to have a good time while you are here; we do want you to have a very profitable conference for we know how much this means to the many people who are in need of your help.

Edward C. Carney
Education Officer - Distribution
Captioned Films for the Deaf
for
John Gough, Chief
Captioned Films for the Deaf
USOE
Washington, D. C.

I am pleased to bring greetings tonight from John Gough, who is Chief of Captioned Films for the Deaf. He was not able to come here tonight and, since I am the only person from the Home Office, he asked me to give you his message.

It is a privilege to be able to extend words of greeting to this gathering We in the Office of Education are gratified at the opportunity to cooperate with an important unit in the Social and Rehabilitation Services facility of HEW and hope this will be but one of many such occasions in the future The Captioned Films program was brought into being through the efforts of Boyce Williams and others in the Vocational Rehabilitation Administration and thus owes its very existence to the foresight and diligent efforts of that group. We are proud to have such illustrious ancestors.

The Twentieth Century has had two great depressions. The first of these was financial in nature and extended over a good part of the 1930's. The second Great Depression is a dejection of the spirit and seems presently to be in full swing. The financial depression was rooted in fear and the same may be said of the present spiritual depression.

One of the fears often expressed with particular regard to the handicapped worker is the threat of unemployment due to automation. Printing, for example, long an occupation favored by the deaf, is threatened in many ways. An announcement only last week describes an electronic system that will handle six thousand print characters per minute. Disciples of new communication media are prattling of the post-literate age to indicate the demise of print as an important factor in future civilization. What do these manifestations of the rapid rate of change in our economy and our civilization forebode for the deaf?

No one can be certain, but it would seem that any group such as the one gathered here this week to ponder some problems of the deaf must face several stark realities. As long ago as 1963, automation was eliminating jobs at the rate of 40,000 per week - 2,000,000 per year, and the growth of population demanded 5,000,000 new jobs per year just to take care of young workers entering the job market. The spiraling rate of investment, 80% of which goes into automation and labor saving devices, suggests that this displacement and squeeze on jobs is continuing at an ascending rate. This is not to say that we are rushing headlong into an abyss, for we know that current employment figures show some improvement.

What one might read in these seemingly contradictory facts is that the nature of employment is changing. Heretofore we have tended to struggle with the idea of how we could make a more highly skilled worker of the deaf person. But if automation is doing away with skilled work, replacing it with computers and machinery, then perhaps serious attention should be given to other avenues of approach.

We know, for example, that America, as compared with Europe, is a physically raw and unkempt country. In a society that is increasingly affluent, probably more attention will be given to cleanliness and beautification. Is there a place for the deaf in achieving this goal?

This is only a random example. We do not really know what directions are going to characterize the future. But we can, I think, be sure that automation is working busily to pull the rug out from under those who are concerning themselves solely with ways to develop more skilled workers in the occupations that have figured prominently in the past.

In the education of the deaf, we have been fortunate enough to get a jump ahead of some other areas of education with respect to the uses of educational media. Perhaps this fact in itself may open up job opportunities for the deaf in servicing, operating, and training in the use of media that would be open to deaf people. Education is rapidly becoming one of America's biggest businesses. Is it not possible that deaf people might be employed in this as support personnel in a very significant and satisfying way?

This, of course, will not happen if we wait to be sought out. Albert Berg, a deaf man who learned football at Gallaudet College, was the first football coach at Purdue University. He was also the only deaf coach ever to work there. In other words, we must plan to have something unique to offer if we expect to be involved on a continuing basis, and we must work continually at keeping ahead.

And so, as you deliberate, I hope that you will venture to think in directions that may point toward ways in which the deaf person may live successfully in the world that is to be, not the world that was but will never be again.

During the depression of the 30's, the late President Roosevelt said, "We have nothing to fear but fear itself." The same is true of this present depression. People like yourselves with vision and determination can surely make a substantial contribution in redirecting thought toward new goals and new methods of reaching them. I hope you have a fruitful and satisfying work experience together here in Knoxville.

O. E. Reece, State Director
Division of Vocational Rehabilitation
Nashville, Tennessee

Thank you Dr. Frey. I think you had Dr. Smith and me here for a particular purpose. Dr. Smith has to sign your projects and I am your intermediary with Washington.

I thought that I would just say that we welcome you to Tennessee and be seated, but Roger thought perhaps I ought to mention what agency I am from and so I shall. I represent the State Division of Vocational Rehabilitation. We are sort of the junior partner in the Rehabilitation Services Administration, with Mr. Boyce Williams representing the Federal Office.

We operate a program and have for a good many years, although it hasn't been quite what we wanted it to be. We think we have finally found the answer. We think the only thing to do is to rehabilitate all the handicapped people. Now that I have given you that, I ought to give you some background about this.

Most of you are probably too young to remember Will Rogers. During World War I they were having a lot of trouble getting the troops over to the European Theatre because of the German submarines. Will came up with a solution to the problem. He told the President, "All you have to do is to drain the Atlantic Ocean and walk the troops across." The President said, "That seems like a simple solution, but how in the wordl are you going to drain it and where are you going to put all the water?" Will said, "Well there are always a few minor details to work out. Now I've given you the solution, you will have to work out the details."

Well, I have the answer to this thing on rehabilitation, we just need to rehabilitate these people. It is going to be up to the staff and the group here to work out some of the minor details.

I think you might be interested to know that we have grown rather rapidly along with the University. I don't know if either is the cause of the other but I think both of them support each other. We have a good relationship with the University and we are very proud of the University We have grown in the past five years from a total of 139 people on our staff to something over 400. I am embarrassed to tell you that out of 400 we do not have a number of specialists working with the deaf. I am pleased to tell you, however, that we now have one counselor becoming competent in working with the deaf and he is here tonight. He will be located in our middle Tennessee Office.

We will not be satisfied until we can have at least one person actively working directly with the deaf in each of our larger cities across the state. We have another young man from our Memphis office who will be entering the Orientation to Deafness program here at the University of Tennessee this month and we are hoping to attract some others. We hope that we can grow with the problem and add additional specialists to the rehabilitation staff, especially those who can work with the deaf.

I was privileged to go to the meeting in Las Cruces, New Mexico, at New Mexico State University, and I think that I probably learned more there than at most any place else in terms of what the great interest is and what the great driving force behind the movement is in working with the deaf. I think I came away with a greater appreciation of the problem and a greater commitment to try to do something about it.

I think I ought to leave you with this one thought. Back in my home county, an old man and his wife lived eight to ten miles from town. They had an old grandfather clock, one of those clocks that stood high against the wall and struck on the hour and on the half-hour. They had retired one evening and the old clock started to strike. When it got up to 42 times the old woman said, "Old man, what does that mean?" He said, "I don't know for sure what it means but I can tell you one thing, it's later than it has ever been!"

Now, I imagine you folks feel about that way about our program. When we tell you we have one specialist with the deaf, it is probably later than it has ever been before. We are glad to say to you positively that we do have one, we hope soon to have more than just a few and hopefully, if we keep on working on it, we may come up with something.

Boyce R. Williams, Chief
Communications Disorders Branch
Social and Rehabilitation Services
Washington, D. C.

We all heard Ed Reece here tonight and from what he said I am sure that he would agree he needs the help of all you residents of Tennessee. Rehabilitation is not a one man operation. It is a team approach. It takes a lot of people, all pushing in the same direction to accomplish the things that he spoke about tonight.

So if you are not satisfied, if you haven't been satisfied, you take your share of the blame, too. We all have to work together. He has set the pace, so help him and keep at it until you reach the goal of effective services.

I think you all know why you are here. This is in a way, in a sense, a unique venture, especially in the sense that it is a joint operation of two bureaus of the Department of Health, Education, and Welfare. And if you don't think that is unique, you don't know Government. It is a hard job to accomplish. I know Marshall Hester realizes this. He charted the course of the first joint workshop which we had in Las Cruces; a joint workshop put on by the Office of Education and the Rehabilitation Services Administration. This is now our second move in that direction.

Perhaps this is one of the most important workshops that we are to undertake. For years, ever since the beginning, all the way back to 1920, Rehabilitation has never faced up to what the rehabilitation needs of deaf people really are. We have taken what we could and done what we could with the people we have been able to get. We have never yet attacked the handicapping aspects of the disability. Under our new legislation and the rehabilitation amendments of 1965, we now have no alternative - we have to get to work and face up to the task of rehabilitating the severely handicapped deaf person. As of this time we have no tools, adequate tools, to do that job. And that is why you are here - to get us on the road to do that.

Habilitation through media. That is going to be the theme for all of your work here these next several days. We should discover guides which may lead to illumination on the kinds of things we need to do; the kind of instruments that we need to develop to help provide for the needs of these severely handicapped deaf people; the services that they need to become independent in accordance with their individual capacities.

Dr. Smith mentioned the fact he had to stand on his head to read the title here and I think I agree with him. But that is no reflection upon the title in itself. It says here, "Multiply Handicapped Deaf People." I think in the next few days we are going to come face to face with that problem - what we mean by "Multiply Handicapped Deaf People." We must be careful not to confuse multiply handicapped deaf people with multiply disabled deaf people. They are two different categories, although in some respects they do overlap. Let us be clear in our own minds as to what it involves. Realize that we are talking about the handicapping aspects of a very profound disability. Handicaps yield to appropriate training services and this is our mission; to find out a kind of training that we can do and then develop the instruments to do it.

KEYNOTE ADDRESS

Marshall S. Hester, Project Director
Southwest Regional Media Center for the Deaf
Las Cruces, New Mexico

It is a real pleasure for me to have the opportunity to introduce to you today a long-time educator of the deaf, who strayed from the fold. Our speaker this morning started out at the Indiana School for the Deaf before many of you arrived on the scene, 1922 to 1928. In 1928 he went to the Missouri School for the Deaf where he was the principal of the Vocational Department there. While he was in that school, he made the school famous for its innovations in vocational training and for its success in developing deaf graduates who could go out and earn honest livings.

Unfortunately for the education of the deaf, in 1942 he was beguiled with the only thing people get beguiled with, a lot of money, to go to the Bendix Radio Corporation In 1944 he went to the Johns Hopkins University and was associated with the Applied Physics Laboratory there. Since 1952 he has been with the Vitro Corporation and currently is in charge of Proposal Preparation Proposal Preparation for a big corporation means that he has the most delicate job of supervising, approving, and preparing those proposals that go to Washington and get passed all around. Nobody can find anything to complain about, so Vitro does very well. It has been involved in all sorts of things.

It may be that Mr. Norris was so successful in schools for the deaf because his parents were deaf; because he had a knowledge of the problems he was dealing with that many of us never acquire. Anyway, he has had vast experience in dealing with the problems of the education of the deaf, with the deaf worker on the job, and in more recent years, has been in an unusual and creative position developing all sorts of new and challenging ideas. He is unusually well prepared to talk to us this morning about the problem that confronts us.

Arthur G. Norris
Vitro Laboratories
Division of Vitro Corporation of America
Silver Spring, Maryland

I am honored to be asked to address you today - to assist you in setting the tone of your discussions for the days to come. However, before I begin, I must tell you something of my background, which, I suppose, is the reason for my being here.

First, I am the son of deaf parents, and presumably, know something of the mores of the deaf. Second, I taught the deaf (not very well, I am afraid) for over twenty years, both as an academic department teacher and as a vocational principal to which was added athletic coaching and field work. Third, I have spent the last twenty years in industry in the architect-engineering field, electronics, and research and development. Lastly, I came in contact with training aids - principal concern of this conference - before many of you were born. Let me tell you about it.

You remember, I told you my father was deaf. One day I used some bad words in his presence. Being a good lipreader, he understood exactly what I had said. For correction he used the simplest of training aids - his razor strop. And a more effective training aid I have yet to see. It was efficient too! It took only one lession for me to learn to TURN MY HEAD when I had derogatory remarks to make. The portion of my anatomy to which the training aid was applied might be called, in the words of this conference, -MEDIA- half-way between head and foot.

I appear before you today genuinely humble. Humble in the presence of those who are dedicated to the performance of services I have neglected to perform over the last twenty years. Because my wife still teaches the deaf, I am often in the company of good and faithful servants of the deaf like yourselves. Through these people I have kept in touch with developments in the education of the deaf; I see much of the literature, and I continue to live among you even though I don't pull my share of the load. Wonderful and stimulating though they are, these contacts have caused me no end of discomfort. Sitting on the sidelines I have watched the wheel being re-invented several times. I have wanted, many times, to speak my lament for the direction the education of the deaf was taking. I have often wanted to point out the apparent stupidity and wastefulness I have seen. Then I realize that by my absence from the profession, I may have forfeited my right to dissent. I realize too, that were I in the place of those whom I criticize, I might do no better. Someone has said, "It behooves the minor critic who hunts for blemishes to be a little distrustful of his own wisdom."

Nevertheless, since you have been so unwise as to invite me here, and because I have reached that point in time when it is approved to be crabbed, and because I have no axes to grind, I intend to be a little critical. Not so much that I shall be stoned, but that you may, also, become a little critical of your intentions, plans and procedures for the rehabilitation of the deaf, and particularly with respect to the use of media in the performance of this work.

This brings us to the definition of two words:

rehabilitation
and
media

These definitions are necessary in order that we may have common ground.

To me rehabilitation includes every action necessary to place the client into a self-supporting participating position in the community. It includes treatment of mental and physical defects and training for a job. Rehabilitation is not limited to simple placement along with the utterance of a prayer for better things.

Last night Dr. Williams expressed some difficulty in focusing on the meaning of MEDIA. I too, had the same trouble and had to develop a definition which I hope may be meaningful to you.

If we look in the dictionary, we find the meaning very simply stated. Among other things, it is the plural of medium. If we go in the right direction from medium, we find that a medium is an agent or some thing through which a force acts. An agent is some one or some thing we use to accomplish a task. Media, then, refers to tools, devices or displays we use to facilitate or simplify the problem of conveying information. It is our agent in the business of teaching. Now, if we are to get done what we want done, we have to give our agent direction. A golfer gives direction to his club (the media) that he may hit the ball properly. It is this matter of giving direction that causes the most trouble, as most golfers will tell you.

The basic objective for this conference is to "Orient professional workers with the deaf in the use of new visual media and materials." Subordinate objectives are:

1. To identify behavioral objectives for rehabilitation of Multiply Handicapped Deaf People.

2. To develop strategies for implementation and evaluation of new media.

3. To propose guidelines for the selection and use of appropriate media.

4. To recommend ways and means of distributing media to vocational rehabilitation personnel.

What all of this means, of course, is that we will spend the next three days talking about media (training aids) in connection with vocational rehabilitation.

We will witness demonstrations of media;

We will study the implications of media for use in our work;

We will learn how to produce media, and how to use them in improving occupational skills;

We will analyze various types of media, and decide when each should be used;

We will discuss the advantages, the disadvantages, comparative costs and unique features;

We will analyze environment in terms of equipment selection, and;

We will consider the presenter's and user's capabilities before selecting the equipment.

All of this is most worthwhile, and I heartily endorse your efforts, but unless we approach these things with judgment and understanding, all of the beautiful gadgets ever invented will avail us little.

As you may have gathered from my reference to media or training aids as beautiful gadgets, I am skeptical about their indiscriminate use. I believe we must become fully acquainted with some of the basics involved in any kind of instruction, and with the needs of those for whose benefit we will use the media. It is too easy to look upon the new gadget as being the solution to all of our difficulties.

Before coming here I searched for a description of the multiply handicapped deaf person. I found as many descriptions as there are handicaps, and when I began to add handicap to handicap I found that the descriptions increased geometrically rather than by simple addition. The combinations become fantastically complex. Of course, we know that a multiply handicapped deaf person is one with a handicap in addition to his deafness. This handicap could be physical, mental, social, educational, economic, visual, orthopedic, cerebral or just plain disadvantaged. When we take any one of these handicaps and add it to deafness we compound our rehabilitation problem. When we take two or three handicaps and add them to deafness we have an educational or training problem that takes the wisdom of Solomon and the patience of all of the angels to solve. The unlimited difficulties caused by the varying combinations of handicaps with deafness make it seem that we will spend more time trying to understand our trainee than in training him. Nevertheless, if we don't understand him and find out what stimulates him, we will never train him. I hope you will find in the new tools of media something which will provide this stimulation.

I wish that I could tell you that the use of media would provide the solution to all of your problems of rehabilitation. But we all know this is not the case. All you can expect is some help, and then only if you realize that media are only a means to an end. Media only provide stepping stones whereby to cross the stream.

I don't mean to insult your intelligence by saying that. I just want to make certain that we think things through. Before I am through, you may reach the conclusion that I am opposed to the use of media. Nothing could be farther from the truth. I believe in and endorse the intensive use of media, provided that the subject matter of the media used really fits the case. Let's not have something just for show.

Let us take a few minutes to examine some of the hurdles we will have to clear in order to be successful in the use of media in our rehabilitation work. I spoke a minute ago about giving direction to our use of media. Along with making the most efficient use of the media we select to help us, we must give direction to its use. It is no good trying to teach a boy how to saw a board using the back of the saw instead of the side where the teeth are.

Neither is it any good showing film strips or movies about nuclear energy if the client is to be a baker. Nor does it do any good to try to jazz-up our rehabilitation programs with media if all that is needed is to show our pupil exactly how to perform the operation in question. On the other hand, it does do some good to use flash cards and displays to refurbish arithmetical skills if our client is to check invoices.

What I am trying to say, I think, is that we should not yield to the temptation to use media just because it sppears to be the thing everyone else is doing. Apparently, we Americans are suckers for fads. If we don't know how to do the latest dance, the Bugaloo, we are square! If we haven't read The Valley of the Dolls, we are illiterate! If we don't wear turtle-neck shirts, we are unfashionable! Media are very valuable as tools to get our rehabilitation message across, but don't let's use new-fangled media simply because it is an "in-thing" to do.

Back in the days when classroom movies first became popular, there was a teacher, badly bitten by this media form, who had a class with the reddest eyes in school. It didn't make much difference what the movie was about, just so it was a movie. This profusion of movies doubtless did add to the sum total of the student's knowledge. The sin was in the lack of direction. He was being robbed of time better spent.

Conformity - I have just said that we are suckers for fads. Perhaps a more precise statement would be that we are too willing to conform. We used to think of Americans as people not to be pushed around. If we don't like something, we changed it - or tried to. Today we are careful not to rock the boat; we watch the other fellow before we make a move; we copy; we comply; we agree; we CONFORM!

Psychologists, sociologists and others could probably supply many reasons for this conformity. One is that for all of our lives we have been in a personality production line, the home, the schools, and the government all applying pressures which tend to pattern our behavior after that of everyone else. We are tending to act more like mice than men. To prove this for yourself think of the "Letters to the Editor" which you have most admired. They are very likely letters of protest that you wished you had had the courage to write.

The solution, of course, is to become individuals - thinking, feeling individuals. To become willing to sit by ourselves and understand our own thoughts and our own beliefs. We can then become unafraid to give thought to where we are and where we are going - and WHY.

If we lack strength to do this for ourselves, then at least, let's not try to force others to conform. Let us not try to stuff others into a mold too small for their individualities.

What does all this about not jumping on the bandwagon have to do with MEDIA. Simply this - don't jump on the MEDIA bandwagon just because it is here. Don't decide that you need this gadget or that one just because it is attractive, or because the Jones' have it. Even those who have these things to offer will support me in the statement that there is a right time and a wrong time, a right way and a wrong way to use them.

We live in a materialistic age. If we don't accumulate things such as the Jones' have, we consider that we are not doing well at all. Some of this philosophy spills over into school-by-school or agency-by-agency competition. There are individuals, who instead of doing their assigned job, spend a major portion of their time looking for grants to supply some new gadget so that they may join, or even try to lead the herd. It is one thing to acquire equipment to supplement, or facilitate what is already going forward. It is quite another matter to acquire something and then have to build a program around it to justify its acquisition. I can guarantee that industry does not invest one penny in a machine until a profitable venture is assured.

Don't misunderstand me. I am not saying that the use of media will not help you with your training or rehabilitation problems. They will help, and might even give a new dimension to your training programs, but not because of media alone. They must be used with proper intelligence, direction and discretion. And I am old-fashioned enough to think that the greatest returns come from a complete understanding of the persons with whom we are dealing. Too frequently we fail to evaluate what we are trying to do; our methods become stereotyped; the individual becomes a case in a file folder.

Forgive me for using so many words to come to grips with what I think is the most important point I want to make today. You see, I am distrustful of all of these stylized, systemmatized and mechanized procedures that sometimes cause us to deal with the deaf or the handicapped as statistics; something to be put through a machine like sausage. What is good for Johnny isn't necessarily good for Joe.

I am firmly of the opinion that rehabilitation work should be much more personalized than it is. Each client should be dealt with as an individual and not as the statistical result of a battery of tests that are probably invalid anyway. The low road of generalization is easy to take; the high road of specific attention is much harder but it will get you more stars in the crown all of you will wear someday. The person with whom we are dealing is really a person whose desires and needs can help us in the selection of media and training to further his interests. Take my teacher who fell in love with movies - there was doubtless someone in her class who, had he been consulted, or had the teacher learned more about him, could have demonstrated aptitudes more suited to the use of other media than motion pictures.

Don't make rebuttal telling me about your mammoth case loads, and about how you develop profiles for each client to guide you in retraining and placement. You are only solving your problem on paper. Your real problem here is one of getting to KNOW - really know - Johnny and Sally and finding out what they want to do and can do best. Hence, if you know your clients well enough you may have no problems at all when it comes to selecting media to help you get your message across. The selection might just be made for you. And really knowing Sally and Johnny will help us to recognize other limitations beyond those of education. Since you deal with the multiply handicapped, you know better than I of the myriad of limitations imposed upon you and your client.

We all know, of course, that our basic problem is one of education, or lack of it. Taken as a whole, the deaf are vastly undereducated, and as a result, vastly underemployed. I don't mean unemployed, I mean employed at less than their real capability. Formalized training for most of the deaf achieves the elementary level or just above. This is true not because of a lack of native intelligence, but because in the hundred and fifty years we have spent since the founding of the first school for the deaf (1817), our educators have failed to find practical ways to compensate for the handicap of deafness.

For example, the deaf child enters school already behind in vocabulary by some hundreds of words. Most times, the beginner in a school for the deaf doesn't even know he has a name. Nor does he know objects have names. This represents a built-in lag of four to six years in their education and we haven't found a way to close the gap. We don't even intensify the elementary training of the deaf; we still hold nine and ten-month sessions in most schools. One doesn't have to be a genius to calculate that we could gain almost two years on the problem of adequate education if we had year-round school. It takes but little thought to realize that the average deaf child can never, within the same time span, hope to equal the accomplishments of his hearing brothers and sisters no matter what method of teaching is used.

I have been talking about the individual with only deafness as a handicap. You don't need me to tell you that the individual with a combination of troubles is less well off. Our education and retraining problems become compounded because the multiply handicapped persons with whom we will deal have not, for many reasons, obtained adequate formal education. Their communication skills are severely limited. They have few marketable abilities and for the most part, are socially maladjusted. Someone has said that "These manifestitations of multiple handicaps will yield to intensive, highly specialized, long term training procedures." Let us hope that this is true. Let us hope that here you will find something to help you apply the intensive training that is needed.

I have indicted our educators for not coping fully with the problems of the education of the deaf. When I add the burdens that multiple handicaps provide for their administrations, I am a little less certain that I am right in my condemnation. Nevertheless, I believe that employment problems which affect all of the handicapped can be alleviated by renewed emphasis on vocational education; by extending the training given in the elementary schools into vocational and technical areas which afford the best employment opportunities. The decision to concentrate training in vocational fields should not be deferred one minute longer than is necessary. This is true for the deaf, and doubly true for the multiply handicapped deaf.

Ever since I can remember, we have been talking about the vocational education problem even though we didn't call it that at first. At first, what shop work there was centered about home-oriented tasks of an agricultural economy and was established only to occupy the idle time of the pupil. Later, we called this work Industrial Education, but it was patterned as much after industry as I am after Gina Lollabrigida. About 1943 we began to call it Vocational Education and there were some genuine attempts to develop in-school courses leading to placement in industry. But now, many of the problems that might have been solved in the schools are those of Vocational Rehabilitation - your problem.

Maybe I am being unfair to many educators of the deaf; there have been, and are, some giants in this field. They have had all sorts of problems that they will say I know nothing of, and I am sure they will be right. But I fail to understand why, in view of the demonstrated needs of the majority, we cannot now put the emphasis where it belongs - on Vocational Education. The gifted deaf student and the late in life adventitious deaf are already provided for. What our deaf people need most to fit them for a station in life is a good understanding of English and a good vocational education.

The deaf can, with appropriate and sufficient training, accomplish all that is necessary for the good life. With vocational rehabilitation we make some headway, but we would be less than honest if we didn't admit that our time, our resources, and a sufficient number of dedicated workers are inadequate to the task to be accomplished.

So, we have an imperfect system. So, we don't do all we should relative to the education of the deaf. So what? Where does this leave us? It leaves us with nothing to do but make the best of it. That is why you are here today trying to find ways that will help you do a better job.

In the doing of a better job - building upon the inadequacies of our educational system - we find ourselves in the position of providing the missing educational or training components. We extend ourselves to do all that we can, but we find ourselves limited to providing little more than specific training in a narrow field. To give a simple example, it is possible with little effort to show a boy how to place a piece of work in a drill press, pull the necessary lever, and then take the work out of the press. But we wish that a foundation had been laid that would enable us to make this boy into a full-fledged machinist instead of just a machine operator. But whatever it is we seek to do to improve the life of our client, we first have to learn to communicate with him. Communication means much more than lipreading, the sign language or the pencil and pad. Let us talk for a minute about the importance of communication.

Communication - Communication is one of our largest stumbling blocks, especially for the multiply handicapped. We can discuss media, behavioral objectives, implementation strategies and guidelines until we are blue, but whether we use a computer or a pencil as a training aid, it won't make any difference if the trainee doesn't get the message. Communication or the lack of it, is the point I am making.

All learning is based on communication - on the transmission of knowledge from one to another. Here, this week, we will talk about using media to facilitate ahd improve our communication. Let us also ask, "Does the media we use help or hinder communication?" Will the ready availability of media tempt us to over-reach the capabilities of the multiply handicapped? The misapplication of media, a form of bad communication, is more to be condemned than not to use media at all. In many operations, there isn't any need to clutter the scene with intervening media when the most direct route to teaching is the use of the tools or equipment. I think of training someone to operate a multilith press. And I can think of many beautiful charts I could prepare for such lessons, but I'd get the job done quicker and just as well if I use the press, the plates, the preparing solution, the ink and the paper. It is easy to put too much dependence on gadgets. They are attractive and often appear to offer support that really isn't there. I am reminded of the excuse my father once wrote explaining my absence from school after I had fallen in the pond. He wrote, "too much faith in thin ice."

Vocations have been taught, and still are, without the formalization of the training aid - almost without anyone recognizing the fact that he was using a training aid. The apprentice carpenter can learn by watching and listening to the craftsman; by repeatedly performing tasks of ever increasing complexity, until he has acquired the same skills as his mentor. The essence of the whole operation was communication between master and apprentice. I am sure many such apprentices failed to master their trade because they hadn't the motor skills. I am also sure that most of the failures occurred because there was a lack of rapport between master and pupil - a lack of communication.

Good communication is an individual matter - something like good health. It is the emotional result of the way people treat each other. The dictionary defines it as including: "participation, sharing, belonging." I am sure each of us has among his friends some with whom he feels entirely at ease - those who require hardly a word of conversation to be understood - those who participate, who share, and with whom we belong. We must try to achieve this level of relationship with each trainee. Get to really know him.

Communication is a primary concern in person-to-person relations. Employees and students like to be treated as people. Without warm, personal and face-to-face communication something is gone out of human relations.

Communication has a range - like a salary range. When communication is bad, learning is slow; the student flounders; he wastes time; he is careless and loses motivation. When communication is adequate people cooperate, do good work and get satisfaction from what they are doing. The communication responsibility rests with each instructor. No one else can do your breathing for you. No one else can do your communicating for you.

A good instructor organizes his interest in communication and tries to improve his level of communication because failure to do so spells disaster. A teacher must be aware of how satisfactory or unsatisfactory communication is; in which direction it is moving (for better or for worse); and why. This requires adequate knowledge of how the individuals in the work group feel.

Three ways to find out about trainee and job relationships are:

1. "Be the trainee" - i. e., a teacher can imagine himself in the other individual's place. If the teacher has proper background and understanding, he can judge the other man's feelings and probably reactions. (Most decisions by supervisors and superiors are based on this so-called "common-sense." Psychologists call it empathy.)

2. "See the trainee" - either yourself or through observers. See what the other man does or does not do. (Absence of action may be informative.)

3. "Ask the trainee" - either yourself, or through agents - such as interviewers; the trainee's associates, friends, family, and neighbors.

When a teacher thus learns the communication needs of his people, he meets them with suitable actions. These actions are communicated: orally; in writing; or visually (charts, photos, movies, exhibits, posters, etc.). In industry, 90% of effective communicating is done face-to-face through normal "line" contacts. The wise teacher checks his communication systems regularly just as the wise man gets a periodic physical examination. And that is just what we are doing here - checking and improving our communication systems.

To sum up, we have talked about a number of things pertinent to your work in the rehabilitation field:

1. The importance of providing direction, both for your efforts and for the use of media.

2. The importance of understanding the client and fitting what we do and what we use as media to the client.

3. The importance of viewing the client as a person, perhaps handling fewer numbers, but with greater success.

All of these are important to the success of your work and all could be talked about for days. I hope my mention of them will stimulate your thinking. Of most importance to the thought of your meeting here is the intelligent evaluation, selection, understanding and use of the media available to you. You may know that an automobile provides the best means for commuting to your work. However, if you select a truck instead of a sedan, or haven't learned to drive, you have not approached the problem intelligently.

MEDIA DEMONSTRATIONS

VIDEO TECHNOLOGY

W. Lloyd Graunke, Ph. D.
E. Jack Goforth

During the course of the demonstration in this area, much of the material in Suggestions and Guidelines for Development of Television Facilities in Schools for the Deaf prepared by E. Jack Goforth, et al, was alluded to or formed the basis for the demonstration and discussion. For in depth discussion and information relative to the cost factors and systems set-up, the reader is urged to secure a copy of the document. Information relative to its acquisition is available at the Southern Regional Media Center at The University of Tennessee, Knoxville.

Basically, three points were covered during the demonstration:

Origination
Distribution and Transmission
Display and Presentation

Involved in origination is, simply, the fact that a signal or program must have origination at some place or another and a pick-up device must be available and utilized. The signal (a program) may then be live or on tape, in a studio or out, and with a camera present to pick-up the signal.

Distribution and transmission implies that the signal will be transmitted. It may be transmitted to tape or it may be transmitted through a system, usually a closed circuit system which in turn relies on cables for transmission.

Finally, the display and presentation facet indicates that a means of viewing the transmitted signal is available - a television monitor. This is the third component necessary for video utilization which has as its purpose the presentation of a signal to the viewer(s).

Essentially, then, it is necessary to originate a signal, which may be of the magnitude of a complete program, transmission of the signal, and presentation. In addition, the signal may be preserved through use of video tape recording techniques and thus provide the added advantage of permitting easy storage and retrieval.

Again, for a more comprehensive discussion, it is suggested that the person interested in the use of television consult the publication mentioned earlier.

PARTICIPANT COMMENTS

The cost is a problem in many cases.

There is likely to be an absence of technicians for teaching and evaluation in its use.

Good potential for vocational assessment of the client; also has development of self-evaluation skills.

AN INTRODUCTION TO PROGRAMMED INSTRUCTION

by

Robert E. Stepp, Ph. D.
Director
Midwest Regional Media Center for the Deaf
University of Nebraska

and

George Propp
Administrative Assistant and Regional Coordinator
Midwest Regional Media Center for the Deaf
University of Nebraska

General Principles

The idea behind programmed instruction is really quite simple. People learn best when they respond actively to each new item of information.

Programmed learning may formally be described as the process of arranging materials to be learned in a series of small steps designed to lead a student through self-instruction from what he knows to the unknown of new and more complex knowledge and principles. Each step is relevant to the preceding step and to the one that follows. The student responds at each step and when his response is correct he can proceed to the next step. The learning program is the completed route to the mastery of the subject for which the program has been prepared. Generally it is assumed that failure is the fault of the program, not the student.

Programmed instruction is an old method of learning utilized by Socrates, developed in the 1920's by S. L. Pressey, and more recently revised by psychologists B. F. Skinner and N. A. Crowder. Over recent years it has made considerable impact in education, despite the fact that it is still a relatively unperfected art, and today literally thousands of programs are available from commercial sources. (A number of available programs were on display.)

The principles of programmed instruction as applied to the education of the deaf offer us untold possibilities. One of the greatest assets of this instructional technique lies in the ability of programmed instruction to interact with other developments in education.

Two Basic Types of Programming

Two basic types are linear and branching programming. The first form is a straight sequential development of a topic in which each bit of information is presented in short steps, increment by increment, in such logical fashion that the student may teach himself. In linear programming each student proceeds at his own pace through the entire program which is identical for all learners. A branching program, however, permits the student to cycle through that part of the program which is pertinent to his needs. In some cases this may be remedial material to which he has been "branched" in order that he may have the understanding required for the mastery of the program; in other cases he will skip segments of the program. The student by his own responses guides himself through the program. Almost any type of program can be branched to some extent, but maximum branching capabilities can only be achieved with computerization.

Characteristics of Programmed Instruction

1. Ordered sequence
2. Short steps permitting few errors
3. A constructed or overt response
4. Immediate knowledge of results
5. Self-pacing
6. Reinforcement

Response Modes

Since the learner may respond in a multitude of ways, programmed instruction is particularly adaptable to the needs of the handicapped student. Some of the suggested response modes are:

1. Writing the correct answer
2. Checking the proper choice
3. Identifying the right picture
4. Pushing the proper button
5. Construction of parts
6. Practice of movements
7. Reproduction of models
8. Manipulation of objects

Immediate Knowledge of Results

One of the major advantages of programmed learning, besides its logical developmental sequences, is the immediate confirmation that the student receives. He knows as he proceeds (while he studies) whether he is right or wrong. Not only is he encouraged by this verification, he is corrected immediately and thus avoids the "unlearning" that often is required in traditional teaching situations.

Applications

It is difficult to conceive of a learning situation where programmed instruction could not be applied. It is presently being used in a wide variety of roles:

1. In education at all grade levels and in all subject areas
2. For in-service training of teachers
3. In adult education
4. In industry
5. In military and government programs

Teaching Machines

Programmed instruction may be used with or without teaching machines. Although programs that do not require machines are considered to be less expensive, machines do have some advantages, as well as some disadvantages:

Advantages	Disadvantages
1. Permits Addition of sound	1. Initially expensive

2. Permits addition of motion	2. Limited programs
3. Facilitates control	3. Storage and accessibility problems
4. Non-consumable programs	4. Starting and stopping difficulties
5. Adapt to needs of handicapped	5. Maintenance problems
6. Motivational factors	6. Social acceptance
7. Miniaturized programs	7. Limited flexibility

Visual Programs

Programs, by perceptive medium, may be verbal, visual, auditory, tactile, or any combination of these. The one form which possibly offers the greatest potential in the education of the deaf is visual programming. Not only may visual concepts by conveyed by this means, but also the deaf may receive the supporting narrative and explanations by either speechreading, fingerspelling, signing, captioning, or any combination of these visual language modes that would be most advantageous to the learner. Of all forms of visual media, probably motion pictures and television offer the greatest opportunities for serving as a programming medium. The 8mm film, both silent and sound in cartridges is presently the most convenient mode.

Demonstration of 8mm Films

(At this point of the presentation a number of 8mm films were demonstrated.) The participants were shown various examples of:

1. Standard 8mm silent loop film in cartridges
2. Super 8mm silent loop film in cartridges
3. Standard 8mm cartridge film with magnetic sound
4. Super 8mm cartridge film with optical sound
5. Front screen and rear screen projection systems
6. Different forms of student responses as elicited from various film programs.

Advantages of 8mm Films

The advantages of utilizing 8mm films in the education of the deaf are numerous. In the course of the presentation the following points were stressed:

1. Programming medium
2. Presentation
3. Review-Question
4. Response
5. Confirmation
6. Convenience
7. Progress
8. Packaging

Closing Remarks

The real challenge is to design programmed learning sequences - not teaching sequences.

Often instructional materials and programmed learning sequences are selected to help the teacher teach rather than to help the student learn. When the learning resources are designed for the student, they must be constructed to achieve different goals and purposes. Study programs are needed which will permit the deaf student to become an independent learner. These utopian objectives are equally true for rehabilitation programs. If the deaf person is to become an independent adult he must begin by becoming an independent learner.

You will never be successful in rehabilitating the deaf person until you are able to design an instructional program which will enable the deaf person to rehabilitate himself.

PARTICIPANT COMMENTS

Programmed learning, or sequential learning can be provided for clients in the rehabilitation setting, and utilizes 8mm film, booklets, slides, etc. designed to facilitate the client's acquisition of skills and knowledge in a highly individualized fashion. As such it is usable for both fast or slow learners, and those that are on the continuum between.

Films are available and can be designed to function in plastic cartridges, easy to insert in machine. These can easily be made available to small groups or individual students for unsupervised learning. Can be programmed for practice of the concepts being taught, and also immediate knowledge of results are available.

It would be possible for an RCD to develop a program to suit his particular needs.

A real time-saver, if it can be made effective for use with the multiply handicapped.

Where can more information regarding the programming of instruction be obtained?

"Must" reading for those interested in the concept of programmed instruction:

Mager, Robert. Preparing Instructional Objectives. Fearon Publishers, Palo Alto, California

Mager, Robert. Developing Vocational Instruction. Fearon Publishers, Palo Alto, California.

Summary

Programming is a logical method for the deaf; 8mm is a natural for this.

Preparation of programmed materials requires (a) planning in terms of the behavioral objectives the learner is expected to demonstrate at the completion of the program, (b) knowledge of the entering behavior of the learner, and (c) proper sequencing of the material to be learned.

PROJECTED MATERIALS AND EQUIPMENT

James Howze
B. Robert Gonzales
Joseph Panko

Our group was generally concerned with projected materials and how to best utilize them. It was stressed that not only can materials and equipment be used separately, but they can often be used profitably in conjunction with each other.

Filmstrips often have captions that are at too high or too low a level for the intended learner. Also, the captions on a filmstrip tend to "freeze" it to one particular usage. By using the overhead inconjunction with the filmstrip projector, we can alleviate these problems. By masking the overhead projector with a piece of cardboard and allowing a strip of light to show on the screen we can blot out the captions on the filmstrip and put in whatever captions or language we desire. This method may also be used to caption slides.

We discussed the use of transparencies in teaching people to fill out forms and applications. We stressed the necessity of usingforms from within the local region rather than having one example form for all areas.

We discussed making 2" x 2" slides on job sites for several purposes. One could be to familiarize the prospective employee with actual on-the-job conditions. Another would be to acquaint the client with key personnel before he begins. Another would be to indicate job requirements. The Polaroid camera could be used along with or instead of 2" x 2" slides in on-the-job pictures.

We discussed the effective use of both transparencies and slides, of records, test scores, etc. in staffing clients. This way everyone concerned with the staffing would have the pertinent data readily acessible.

PARTICIPANT COMMENTS

It was generally felt that 2" x 2" slides with pictures of people in actual work situations would be more effective than drawings of employees on transparencies, i. e., that the slides would be more realistic and concrete.

It was also felt that the positive approach should be used for presentation of on-the-job situations on either slides or transparencies, e. g. while discussing a right and wrong on-the-job situation, illustrate the right approach first to avoid negative attitudes on the part of the client.

THE OVERHEAD PROJECTOR

Raymond Wyman
University of Massachusetts

The overhead projector is the most purchased and most wanted audiovisual device in the field of education today. The number of machines purchased is doubling each two years, and no leveling off in demand is yet evident. Several schools for the deaf already have one overhead projector in each classroom, and all classrooms in these schools will soon be equipped for immediate use of this machine without the difficulty and annoyance of finding, scheduling, transporting, and setting up.

There are several characteristics of this machine and its transparencies that make it so desirable for people who want to communicate something to others. We might remind ourselves that communicate means "to make common." We are all trying to make our ideas, skills, abilities, attitudes, etc. "common" between ourselves and the students we work with.

The overhead system makes it easy for a person to weave the verbal materials he has traditionally used so easily with the visual materials he has traditionally avoided. Instead of giving up his role as dispenser of information to a machine such as the sound movie projector which substitutes for him, he weaves together his own unique combination of talk and visuals into a personalized and custom-tailored presentation related directly to his desires and audience needs.

Words alone have many desirable characteristics. They are so easy to produce, store, transport, and reproduce. They also have a high degree of academic acceptance.

On the other hand, words generally give no clues to their meaning, many of our most common words have several referents, absolutely different words sound alike (ate-eight), they may be taken out of context, listeners have poor auditory discrimination, speakers have poor articulation habits, etc. There is also the confusing world of double entendre and idioms, where words just do not mean what they say.

The overhead system enables a trained teacher to combine the best of the verbal and visual materials for communication. The projector is usually placed on a low stand beside the teacher so that its working surface is at about thirty inches, or normal desk height. The teacher sits beside the machine when material is projected onto a high screen so that everyone can see all of the projected image. The screen may be tilted to avoid keystone distortion in which the top of the image is wider than the bottom. The projector may be left on constantly to illuminate the lips of the teacher for lipreading, or it may be turned on only when the teacher wants to direct attention to the screen and away from himself. The overhead puts several times more lumens of light on the screen than other projectors, and is used in a regularly lighted room so that eye contact is maintained at all times.

When a transparency is placed on the lighted stage, a pencil or any other pointer can be used directly on the details to appear in magnified form on the screen. There is no need to go to the screen to point to details. There is no doubt that students are looking at the intended detail and the reactions of students can be checked constantly for comprehension.

Transparencies with several components or details can be progressively disclosed. Before placing the transparency on the stage, one or more pieces of paper can be placed over the areas to be temporarily hidden from the audience, but not the instructor. As the points are made, the key areas of the visual are disclosed. Pieces of heavy paper or cardboard can be hinged to the base or static transparency with flexible pressure sensitive tape.

Transparencies can be made with additional sheets of information to be added to the static by the overlay technique. This technique enables the teacher to start with a simple idea or an overview, and then add or emphasize details for study. The simplest overlays are patches of color the correct size and shape to delineate certain details.

The opposite of this technique involves removing overlays in order to change a complex visual into simpler parts for individual study. Movable parts can be manipulated on a static visual to show alternate arrangements or conditions.

Overhead transparencies may be individually produced, made in a local production shop, or purchased from a large number of commercial producers. The best users of these usually combine materials from all three sources in order to accomplish their goals.

Spur of the moment transparencies are needed as new needs are identified just before or during a presentation. There is no time, facility, or need for a beautiful and detailed transparency. Many markers are now available to write and draw directly on blank sheets of plastic or the plastic roll found on many machines. These markers may be water or petroleum (lighter fluid) soluble. They may be felt tipped or grease pencil type. Almost anything that can be done on the chalkboard can be done as well or better on plastic.

Any small opaque or transparent colored objects can be placed on the projector stage to create a silhouette. Numbers, relationships, characteristics, etc. can be pointed out.

Many pressure sensitive materials are now available to use on plastic sheets for projection. Kits containing a variety of transparent and opaque tapes in different widths, transfer letters, symbols, etc. are available for the do-it-yourself transparency maker.

Photographs can be enlarged to about eight by ten inches on film for projection on the overhead. This process requires a darkroom and skill, and is not commonly used.

Several systems for transferring the ink from a printed page to plastic for projection have been developed. The paper must be clay coated as in most illustrated magazines. The result can be a beautiful full color or black and white transparency from ordinary paper materials. The process requires special materials, practice, and a sink for rubbing off and flushing away the paper which is destroyed.

Thermal transfer or processing machines make transparency production from black ink images on paper very quick and easy. A sheet of heat, but not light, sensitive material is placed over the material to be copied and the two run through the machine to produce a complete and dry transparency ready to project in a few seconds. Any black ink or pencil marks on one or both sides of a sheet can be used. Newsprint works particularly well. Thousands of masters have been printed especially for this process. The usual machine will not accept any bound or stapled material and no colors will be reproduced.

Thermal machines will also make spirit duplicator masters from the same material used for making the transparency. This makes it easy to prepare hand-out sheets for later study.

Several two-step photo copy machines are available for copying colored ink and markers as black and white transparencies. They ordinarily require more time, expense, and technique. Some of them will copy from bound books.

Primer typewriters are needed in order to make transparency masters for easy visibility. Regular typewriters produce letters that are impossible to read in many situations. A common rule is to use letters three-sixteenths of an inch high on transparencies for easy reading. In making lists or outlines, probably no more than six or eight lines should be used on one transparency.

The diazo system of transparency making requires a master that has opaque lines on one side of a translucent or transparent base. India ink is commonly used on tracing paper for this purpose. Incomplete diazo dyes coated on acetate can be destroyed by exposure to ultraviolet light or completed into a dye by exposure to ammonia gas. In diazo duplicator units, a master is placed over the sensitized acetate sheet and exposed to ultra violet light which is blocked by the opaque lines. The protected areas are then completed into a dye by ammonia gas. This system is more complex, but permits many excellent transparencies to be locally produced.

Master books in many subject areas are available for diazo reproduction.

Either thermal or diazo materials are available for making reversed images in which the letters are bright and the background dark. These are useful for special effects. The letters can be colored simply by adding transparent pressure sensitive tapes or using a felt tip pen.

Thermal transparencies can be used as diazo masters in order to combine materials from several sources into one visual. Pieces of thermal material can be arranged on a sheet of clear acetate and fastened with transparent tape for diazo exposure. Rub-on letters can be added for explanations. A high quality copy can be made from crude materials.

Apparent motion can be attained on the overhead by use of polarized light. Pieces of material that will polarize light are stuck on parts of the transparency then another piece of polarizing material is made into a rotating disc over the lens. The flow of fluid through a pipe can be simulated with this system.

The visual material on transparencies should be kept within an area 7-1/2" x 9-1/2" for easy and complete projection. Some people prefer to keep all transparencies in the horizontal format (9-1/2" dimension horizontal) in order to assure that each can see all of every message. The generally accepted frame or mount for transparencies measures about 10-1/2 by 12 inches, and transparency sheets are mounted with tape.

The incomplete visual to be completed with markers in front of the group is a technique found effective by many teachers. The difficult outline such as a map is drawn in advance and then the details are drawn in as needed while the audience observes and participates.

The overhead projector and transparencies integrated into the regular presentation process enables the teacher to weave together very effective and personalized combinations of verbal and visual materials.

PARTICIPANT COMMENTS

Useful for teaching sequential processes, teaching use of machines, and in conjunction with programmed material.

The differences represented by the various projectors and copiers require careful study to decide on the most propitious purchase by the rehabilitation person.

Comments on demonstration:

1. Would be quite useful in a rehabilitation setting.

2. Where would I learn how to use one?

3. This would solve a number of problems in getting across concepts.

SPECIAL DEVICES AND MATERIALS

Dr. Marshall S. Hester
Donna Chapman
Gerald Pollard

The following special devices were demonstrated and discussed:

Perceptoscope
Dial-Com
Kodak Visual Maker and 2"x2" Slides Carousel
Polaroid Camera
Language Master
Technicolor 1000 Sound Projector
Fingerspelling & Lipreading Films

The Perceptual Development Laboratories has developed a course of study and a series of films for instruction of deaf students in key punch operations for use with the Perceptoscope.

The Card Punch Operation Training program prepared for the Perceptoscope is a complete and comprehensive course of instruction. It consists of a series of films, IBM card forms, and other types of forms, proficiency test booklets, evaluation forms and records, typewriting proficiency tests and an instruction manual. There are thirty-one teaching units included in the ten perceptofilms, which were originally developed for hearing persons. Captions were prepared and added for deaf students.

The Perceptoscope is basically a 16mm projector, with several unique and distinct features. The films can be programmed or remotely controlled by the instructor to provide nineteen variable film speeds with still frame projection, reverse, and variable trigger action for slow motion effects. Control loops also allow for automatic presentation and timing of drills or practice exercises. Several films were demonstrated and the participants had an opportunity to examine the device and the types of materials used in the program now being utilized at the North Carolina School for the Deaf.

A prototype of a new device called the Dial-Com was also demonstrated. This apparatus is designed to permit two totally deaf persons to communicate by telephone. A small earphone-type receiver with a suction cup is attached to a telephone to pick up the signals inside the set. This pick up unit is attached to the Dial-Com by a small wire. On the front of the Dial-Com is a panel of lights which light up in a predetermined manner. This visual code can be cued in such a way that a deaf person can readily communicate back and forth with a hearing person or another deaf person.

Thirty-five millimeter 2" x 2" slides are an excellent medium for visual presentations. When utilized in a remote control carousel projector, their value is enhanced. The carousel allows easy programming for any presentation and, most important, the sequence is not an unalterable one. On the contrary, the slides may be re-sequenced for the particular needs of a specific situation. Heretofore, the photographic skills required to produce adequate slides has been a deterrent to the average layman. Eastman Kodak has recently marketed their Ektagraphic Visual Maker. This kit allows a layman without a background in photography to make high quality slides with ease. This is accomplished through the use of fixed focus lenses and calibrated, controlled light from flashbulbs. The simplicity of the process was demonstrated and participants had the opportunity to "shoot" their own slides.

The Polaroid camera was demonstrated, and stress was given to the fact that, through its use, a photographic record can be made instantly available. The participants discussed the potential of having photographs available quickly, and most agreed that it could be of significant value.

The Bell and Howell Language Master is utilized for language development and/or speech correction. The student is presented a stimulus by the instructor, then makes his own response and is given immediate reinforcement by being able to play back and compare his vocal effort to that of the instructor. It was thought by some that this device could be of value in developing and building vocational vocabularies, especially with the hard of hearing.

Technicolor Corporation's new "1000" sound, 8mm, cartridge projector was also demonstrated. This new projector is cartridge loaded and may be utilized in a group situation or for individual self-study. It is very portable and is quite simple to operate. The major drawback, at present, is the lack of material available for projection. Participants engaged in discussion of means for making films available in this format and the possible uses and advantages of this new sound motion picture format.

A number of cartridged materials, including fingerspelling lesson and speechreading lesson films, were made available and viewed by a number of the participants.

PARTICIPANT COMMENTS

We needed more demonstration of the speech indicator.

Loop films have good potential for our use. Where do we get the films?

Justification of Language Master use would be based on the number of hard of hearing clients the RCD would be working with - or would it?

The Dial-Com seems complicated; not clear in its possibilities. Hopefully procedure will be simplified.

MEDIA FOR REHABILITATION PERSONNEL

Some Applications and Implications of Audiovisual Media in a Rehabilitation Center

James A. Bitter
Jewish Employment and Vocational Center
St. Louis, Missouri

The use of various audiovisual techniques in all phases of education has received increased emphasis in recent years. Audiovisual media are considered an important aid in the learning process and educators are generally encouraged to use AV hardware and materials.

I have been asked to present some applications and implications of AV aids for rehabilitation personnel based on our experience with the mentally retarded at the Work Experience Center in St. Louis.

The Center is devoted primarily to the vocational preparation of adolescent retardates within the IQ range of 40 to 78. It conducts a full-time transitional work adjustment and vocational training program for Special School District (of St. Louis County, Missouri) students in their last year in school.

Most of our trainees lack the common experiences associated with maintaining a job, e.g., community and work exposure. They learn best fron concrete experiences; require continuous repetition and reinforcement; and have limited ability to transfer learning from one situation to another.

To us at the Center, vocational habilitation and rehabilitation are educational processes and as such, should involve numerous resources.

Many resources are available to rehabilitation personnel such as workshop experiences and work samples, including workshop tasks, vestibule training, and short-term job-sites for evaluation and training. Trade schools and on-the-job training are examples of other resources available to rehabilitation counselors and instructors.

In general, it is our feeling that first hand vocational experiences by (re)habilitation clients in a controlled environment is, in most cases, the most essential to training. Learning is enhanced by involving as many of our sensory faculties as possible. Actual on-the-job evaluation and training does the most to accomplish this. Goldstein (1964) in a study on the efficacy of audiovisual instruction with the mentally retarded reinforces this emphasis on direct experience, and states further that it should be coupled with more extensive use of AV materials.

Though there has been increasing emphasis on using AV aids for training, very little information has been published in the past five years regarding audiovisual techniques with the mentally retarded. Three efforts with vocational training of retardates deserve mention. Silvern (1963) described an "aural-visual" approach consisting of colored slides with audiotape instruction for teaching a workshop job involving assembly of an indoor television antenna. Neuhaus (1964) utilized the same method at Abilities, Inc. in New York for teaching a plug soldering job operation. This same technique and similar approaches have been undertaken at the Devereaux Foundation in Pennsylvania.

In each, the task or job is displayed visually, usually in a vestibule training situation, by means of color transparencies. The audio is standardized on tape, and the instructor provided additional support. A third dimension consisting of kinesthetic stimulation through the handling of props exists in each of these programs and is emphasized at Devereaux.

The advantages of audiovisual techniques and materials are numerous. They generally utilize more than one sensory mechanism. They also offer a practical way to provide the trainee with exposure, orientation, and specific job training when used in conjunction with other learning situations such as workshops, job-sites, field trips, trade schools, on-the-job training, and placement.

As a communication tool AV media help instruction to be more concrete. They also lend themselves to a repetition and offer a technique for providing transfer of learning from one situation to another.

Various audiovisual hardware are available and the appropriate medium is dependent on the objectives developed by the counselor for trainee growth. At the Work Experience Center we have 8mm and 16mm film projectors, slide and filmstrip projectors, a tape recorder, and an overhead projector.

Thus far, we have used only commercial films with the 16mm and filmstrip projectors. Materials for use with other equipment have been prepared by our own staff.

Thirty-five millimeter slide transparencies are helpful for acquainting a trainee to a field trip or job site experience before assignment. They can be used to convey specific instructions in job duties, and terminology associated with the job and equipment. The overhead projector and transparencies can also be used for teaching terminology. In addition, the WEC training counselors have developed overhead transparencies to instruct groups of trainees to read and properly indorse payroll checks, and correctly complete employment application forms.

Audiotape can be synchronized with visual aids as was done in the three workshop programs cited above. It can also be helpful as a medium by itself for immediate feedback to a counselee. One WEC training counselor used audio tape to correct immature speaking habits of a trainee.

One of the more interesting techniques at the Center makes use of short 8mm film loops. These films have been developed for use in a continuous loop projector which allows single framing and automatically or manually cued stops. Cueing permits the counselor to stop at appropriate points for discussion or reduce a task to minute steps which can be grasped more readily by slower learners.

Five film loops have been prepared at the center. The loops were prepared from a commercial 16mm film which exemplified the various job duties of a dishmachine operator. With permission from the producer of the film, it was reduced to 8mm, edited, and organized into four-minute segments emphasizing single concepts which are relatively abstract, such as the importance of the job, responsibility, work organization, and teamwork.

Some of these films lend themselves to transfer of learning from the dishroom to other situations. For example, one of the training counselors effectively uses the films to teach work organization and teamwork in the workshop.

(Demonstration) The film Teamwork in the dishmachine operator series illustrates examples of interaction with others and points out the need for cooperation with other workers.

The counselor may stop the film on any frame for purposes of centering attention and discussion on an example of teamwork. The advantage of single framing can be used to reduce an operation into job steps, for exampe, coordination between workers.

Problems that occur when teamwork is absent, like work stoppage, pile-up, and worker frustration, can be discussed by again stopping the film at appropriate points. The film is short and if necessary, it can be repeated.

The advantages for transfer of learning to other jobs or tasks, bench assembly for example, are obvious. The counselor immediately follows this film loop session with participation by the trainees in a simple group assembly task from the workshop. When the trainees understand the concept of teamwork as it applies to the workshop job in the classroom, the counselor follows through with reinforcement on the production line. (End of demonstration)

Audiovisual aids have many advantages for vocational training. But perhaps the greatest danger to the effectiveness of these media in rehabilitation is an emphasis on extensive use of hardware without a corresponding stress on effective users.

AV media have, intrinsically, value for making learning more concrete, providing repetition and needed reinforcement, immediate feedback, and reducing the learning time. However, the value of media are only as good as the people who use them. It requires a skilled clinician who knows the needs of his trainees, the advantages and limitations of various media, and can effectively use the best AV aids at the appropriate time.

Basic understanding of media applications, i. e. knowing when, what and how, is perhaps the most important factor affecting the potential AV aids of rehabilitation personnel.

The clinician, counselor, or teacher, must develop objectives for his client, and must be able to identify the proposed change in the learner. Without clearly defined goals established by a skilled clinician it is impossible to evaluate learning and there is no sound basis for selecting appropriate materials, content and resources.

In summary, programs in rehabilitation centers should, it would seem, utilize an experiential approach to vocational preparation augmented by various resources including audiovisual aids. The selection of the appropriate resource or media is dependent on the immediate and long-term needs of, and vocational objectives for, the individual trainee. Audiovisual materials can have many advantages in promoting learning. They can reduce the learning time by making communication more concrete and more exact. Rehabilitation personnel must know the learner, be able to set objectives, match resources with the needs and capabilities of the learner, and effectively use available media.

References

Goldstein, E. *Selective audio-visual instruction for mentally retarded pupils*. Springfield, Ill. Charles C. Thomas Co., 1964.

Neuhaus, E. C. Audio-visual job training for mentally retarded. *Rehabilitation Record*, 1964, 5(2), 32-35.

Silvern, L. C. Object analysis and action synthesis methods in developing a program for the assembly of a television antenna in a sheltered workshop. *Mental Retardation*, 1963, 1(3), 140-147.

Implications of Media for Rehabilitation Personnel

William Williams
Rochester Institute of Technology
Rochester, New York

Rehabilitation Counselors for the Deaf (RCD) are salesmen when they attempt to place deaf clients in business and industry. They are training coordinators when they try to prepare that client for his job.

Both these functions are performed in service to the client. Frequently forgotten however, is the fact that these functions are also performed in service to the employer. This places the RCD in a position of performing a service which the employer normally does for himself in a fairly competent manner. Therefore, if the RCD is going to be effective in this role, he must perform as the employer would or as the employer would have him perform. To do this, the RCD must think as the employer does.

The employer thinks profit. Profit equals price minus cost plus overhead. Assuming the price ceiling to be determined by the customer, profit may be maximized by decreasing cost and overhead. This is accomplished in large part through efficiency.

When an employer trains, he has a specific objective in mind and he tries to attain that objective in the most efficient manner he can. The employer is gradually learning that the most efficient way he can train frequently means the introduction of media.

What are the implications of this thinking for rehabilitation personnel? Well, first of all, what specific media is involved? These examples were developed at the Lockheed Missile & Space Company in California. In spite of the obvious size and prosperity of the company, note that these media were built at almost no cost by substituting will and ingenuity for dollars and cents.

1. Electronic Assembly Kits. These are no more than collections of old wire with clips, inexpensive components and terminal boards. With these, students are allowed to assemble electronic schematics

and see their errors without going through expensive components and time-consuming soldering operations. These homemade kits enable students to learn to assemble from electronic schematic drawings in a short time and at low cost.

2. Programmed Instruction. With only a few lessons in writing programmed instruction, employees who had never seen the inside of a college began to write clear, meaningful programs which met specific, measureable objectives (a la Mager) set forth by these same employees. What kind of things are taught with the programs? Here are some samples: How to read a vernier caliper; electrical cable molding; connector fabrication; insertion and removal of contacts; crimping lugs and splices; coax connector assembly. These are all examples of simple, single concept, 15-25 minute programs available which effect increases in profit by reducing the cost and/or overhead of production.

3. On the Job Training (OJT) Kits. These kits are slightly larger than a two suiter suitcase and have wheels for portability. They can hold handout materials, tools, supplies, and records. The top comes off and sets up as an easel-like device. Inside the top is a white "chalk" board. Using red, blue, and black felt tip pens and a cloth eraser, this serves well as a "chalk" board. Employees are then gathered in small groups in corners of shops, close to their jobs for short training sessions.

4. Mock-ups Wooden scale models are used extensively to teach assembly and functions of units.

Since Lockheed has a large number of deaf employees, it is necessary for media to be largely visual. Within this environment, media used in training and directing employees hold some fairly specific implications for rehabilitation personnel

DO IT FOR LESS

At Lockheed a few years ago, a large number of audiovisual units were installed in several manufacturing areas. These units utilized 35mm slides and audio tapes. An employee used a unit by loading both slides and tape, putting on a headset, pressing the "Go" button, getting comfortable and then listening and looking as the slides showed him and the tape told him, and while the tape was not telling him, it was playing music for him - jazz, classical, semi-classical, pop, rock and roll, Broadway, whatever soothed his psyche. The units were great. They did the job. The employees loved them. However, they cost well over $1,000 apiece, not counting the production of the slides, tapes and music, not the cost of power, space and employee orientation.

The deaf employees did not like the units and for obvious reasons. This presented a problem to the company. Then an ingenious new device was developed strictly for the deaf employees (there were a large number of deaf employees). These new devices were called loose-leaf notebooks. The notebooks were used by setting them on end and using 8 x 10 color pictures instead of slides and typewritten dialogue instead of audio tape. Of course, music was not a factor. It worked just as well and cost a great deal less.

> The implication: Your clients do not have the liability of hearing. Thus, the objectives for audiovisual materials can often be met without the audio and for a lot less cost.

ONLY TRAINING?

When the words "media" and "audiovisual" are used, most people tend to think of training and education. In industry, however, media is frequently used for a purpose other than solely training; this function is as an aid to production; i.e. a production or manufacturing aid. Manufacturing aid? You mean like tools, dies, templates, and the like? Yes. For example, the $1,000 audiovisual device mentioned earlier is now being used extensively by large industrial firms to provide instructions in the assembly of complex electronic, mechanical, and pneumatic units by non-skilled and semi-skilled labor.

Although some large firms are aware of the use of traditional and non-traditional training aids and manufacturing aids, countless firms, both large and small, are still in the dark ages of specifications, standards, and detailed, lengthy directions.

The implication: Do not let yourself stop with training; be it on the job training or formal education. If you can, look into the processes and techniques used by business and industry in your area. See if you can find an application for the media you see at this workshop to help the employers in your area do their job more efficiently with deaf employees. Many aerospace firms are manufacturing complex missile and space vehicle units using semi-skilled and unskilled labor with the help of inexpensive media.

SEVEN STEPS

All that sounds good, but how do you find an application? There are seven basic steps to finding an application and putting to use some of the knowledge gained at this workshop. These seven steps are time consuming but they can be performed by any number of people and agencies including schools for the deaf, vocational centers, consultants, and employers. These seven steps assume you have already established rapport with the employer.

1. Explain to the employer what you would like to do. The employer in this case may not be a man in personnel, rather someone from line management. Work with him in finding the tasks which lend themselves to this manufacturing aid approach by virtue of complexity, repetitiveness (a manufacturing aid would not be practical on a one-time item), basic skills required on the part of the employee, and the probability of realizing a saving, (saving may be putting a less skilled operator on the job, reducing the time spent on the job, decreasing the number of failures, etc.).

2. Work with the employees who do the job (they often have their own time saving techniques) as well as the engineer, designer, supervisor, or whoever else knows how the unit is fabricated.

3. On your own, or with the help of an employee, design the aid.

4. Check it out with yourself, your wife, your children, your

colleagues, etc.

5. Ask the company to check it out with a sample run.

6. Give it to the company for their use.

7. Get feedback from the company and the employees who use it.

I am personally aware of this system working in more than one company that employs deaf people regularly.

One of the reasons some companies do not use media as manufacturing aids now is that they have not allowed themselves to look beyond the moderate initial cost of the media. For this reason, you might try to make the equipment, supplies, and materials available to them. "Them" in this case might be a company training man, a line supervisor, a personnel man or the employee doing the job. In most cases the equipment is easy to use - super 8 movie camera and loop film projector, or a still camera and 35mm projecting device, or a loose-leaf notebook for 8 x 10 glossies. Make reference materials such as "how to" and programmed instruction materials on photography, the preparation of training aids, and programmed instruction material available to them.

EMPLOYER VENDORS

Everything mentioned thus far has had one overriding implication for the rehabilitation person - work. This last point does not necessarily carry the same overriding implication with it.

Major vendors (suppliers) who supply manufacturing firms with parts for assembly can be of immense help They all have a vested interest in seeing their product installed and used correctly by the manufacturer. From these vendors, you can often secure films, slides, filmstrips, mock-ups, models, tools, and parts for a training on a loan basis. They will often provide the technical assistance or complete programs, even to the point of modifying programs for the deaf audiences. Contact them. Use their services. There is a great partnership to be formed here, the by-product of which is trained, placed, and continually employed deaf people. Goodwill Industries in Northern California has exploited this to such a degree that vendors (field engineers, salesmen, etc.) find themselves spending long hours and weekends without pay in setting up training programs, lending large amounts of tools and materials, and developing new training and manufacturing aids.

SUMMARY

What should all this imply to you as rehabilitation people? Two things:

1. Many companies have not discovered the many uses of media either because of lack of knowledge or fear of the expense of it. Capitalize on that. Use your knowledge to show the way and use your dollars to buy equipment.

2. Many other employers are beginning to use media extensively as both on the job training and manufacturing aids. You must jump on that bandwagon if you are going to sell your wares. Will companies in your area allow you to borrow their media for pre-employment training? Can you find someone or some agency who can and will rewrite media intended for hearing audiences so they may be used with deaf audiences? Can the vocational rehabilitation center in your area work with industry to devise new or modify old media? Is it possible for Captioned Films to survey industry to see what is being used and how it can be modified for deaf people? Can Captioned Films underwrite industry for rewriting their own material for use with deaf employees?

This action cannot only place deaf people, it can help keep them on the job after placement.

COMMENTS

Ben M. Schowe, Jr.
Teacher - IMC Director
Ohio School for the Deaf
Columbus, Ohio

In common, Mr. Bitter and Mr. Williams suggest:

(1) Successful use of media requires people who can (a) pinpoint problems of individual clients, (b) can select, adapt existing materials, and create new materials that will meet the needs of most clients, (c) can help clients utilize the materials.

(2) Programs have utility if clients can perceive their relationship to direct experience - the things an employee actually does on the job.

(3) The type of media used to instruct varies with the needs for initial exposition, repetition, reinforcement, or transfer of a direct experience.

(4) Useful media reduces learning time - but the instructor must know how it must be used and supervise its use to ensure intended goals.

Mr. Williams suggests:

(1) Media can often be inexpensive and simple.

(2) Kits of manipulative materials are effective in training through individual practice as well as for demonstration to groups.

(3) To communicate information or establish concepts, media should be largely visual for deaf employees.

Mr. Bitter emphasizes that media may recreate direct experience by adding such features as:

(1) Slowed action for clearer observation of some process in production.

(2) Stopping action for discussion or analysis.

(3) Magnification of an obscure operation.

(4) Addition of terminology to aid communication associated with some operation.

SHOW AND TELL

SHOW AND TELL

Most of the second day of the workshop was spent by the various groups planning and developing materials for use with the various media in the four general areas of vocational education or training, personal adjustment, occupational information, and job application. There was not sufficient time, nor were the necessary resources available, to actually develop sample materials for all media. However, the presentations did discuss the development of materials where it was felt applications could be made and several completed projects were demonstrated to the workshop in general.

For purposes of illustration, an attempt has been made to describe several representative results in each of the areas named above. It is hoped that this approach will serve to point the way to people working with multiply handicapped deaf people and others in such a manner that individual initiative in experimentation with media will be encouraged and brought to function.

In each case, the groups attempted to define objectives for the use of the material in behavioral terms and to work towards development of materials which would enable clients to achieve the defined objective.

VOCATIONAL EDUCATION OR TRAINING

Demonstration I

Objective: Teach the concept of importance of puntuality.

Media: Slides, motion pictures (live or animated action), overhead projector with transparencies.

Procedure: Develop sequence of events which relate to the results of being (1) late, (2) on time at the job. Use the materials to illustrate and form a basis for discussion as follows:

1st scene: Bedroom - Turn off alarm, roll over, pull covers over head.

2nd scene: Monday - Other workers arriving at plant on time, punching in, see time clock.

3rd scene: Arrive at plant, punch in, time clock shows 15 minutes late. All alone, others inside looking at him, not smiling.

STOP: What happened? What do other employees think? How does he feel?

4th scene: Assembly line - Many people, one missing, work piles up, line jams, people look unhappy and angry. (What happened? Why?)

5th scene: Tuesday - Next day - Late again - Show time clock.

6th scene: Wednesday - Punch in 1/2 hour late - Boss standing near, looks angry. (Why? What might happen?)

7th scene: Thursday and late again.

8th scene: Friday and late again, 15 minutes.

9th scene: Friday afternoon - Gets check - With friend - Looks at friend's check - More money - Man with full check is cheerful, other man looks sad. (What happened? Why?)

Next Week

1st scene: Monday - Arrive on time - Happy faces, friendly people. (Do you see change in people? Why? How does worker feel?

2nd scene: Assembly line - Many people, no one missing, work flow is smooth, no jams - People look happy

3rd scene: Tuesday - On time again.

4th scene: Wednesday - On time - Boss standing near, says good morning with smile on face.

5th scene: Thursday - On time.

6th scene: Friday - On time - People friendly, no work pile-up this week.

7th scene: Friday afternoon - Gets check, with friend, same amount, both happy.

Justification for this media:

1. Slides/Overhead Transparencies
    1. Inexpensive
    2. Easily replaced
    3. Can be made by counselor (homemade)
    4. Slides can be held for discussion
    5. Can show actual situations
    6. Helpful for discussion purposes

2. Movies
    1. 8mm movies not too expensive
    2. Can be homemade
    3. Slow motion - which may put the idea across better
    4. Can be shown by the client at his leisure
    5. Can be made at the actual place of work

Demonstration II

Objectives: To evaluate video tape utilization for vocational training of multiply handicapped deaf adults.

To experiment with video tape in terms of time and material conservation in the area of vocational training.

To evaluate the efficiency of video tape as an instructional tool.

Media: Video tape recording.

Method: Select an immediately available vocational operation that can be utilized as an experimental vocational situation. Around such an operation develop a vocational task and video tape the procedures in a simulated instructional training situation.

Procedures: The electrically operated cloak room in the hall of the University meeting rooms was selected with a job situation similar to a movable dry cleaning clothes storage rack being developed. A trainer-trainee situation was worked out and video taped.

Evaluation: (A) While the setting was not necessarily one where video tape would be most profitably utilized, this quickly developed situation was sufficient to indicate that video tape training procedures do have merit in terms of the objectives of the experiment outlines.

1) After an operation is personally demonstrated, a trainee has the opportunity for frequent review without requiring the trainer's presence.

2) Where training would involve practice with expensive consumable materials, video tape review would provide a means of conserving materials in many training situations.

3) Video tape provides the closest approximation to a live training situation and is felt to have a greater utility than training films because a situation can easily and inexpensively be retaped whenever the job task is altered in any essential way.

4) A counselor with ability in manual communications techniques, or an interpreter, can supplement the training process by interpreting the instructions which may be incorporated on the video tape by split screen techniques.

(B) Possible disadvantages of video tape utilization for vocational training with multiply handicapped deaf people are:

1) The initial cost of equipment may be prohibitive.

2) Shop and other industrial settings are not always compatible for the presence of such sophisticated and comparatively delicate media equipment.

3) Unless the vocational training personnel involved are oriented to media usage with other workers, they may not appreciate the utility of this procedure and may reject such training arrangements as too complex.

4) The "need" for such unique arrangements may, in the view of employers, adversely overemphasize the handicapping conditions of the prospective employee.

Many possibilities for the use of video tape in vocational training seem apparent. This media could conserve the time of our very limited number of counselors and facility personnel, conserve materials that might otherwise be consumed while being used in training and the client could review the job procedures as often as desired or necessary.

In the presentation it was suggested that the viewers use their imaginations. The cloak room at the University of Tennessee was shown as a laundry and dry cleaning plant. The taped presentation went as follows:

1. The owner showing how to hang coats properly.

2. Close-up views of how to use the hand operated movable rack and also the foot operated control were shown.

3. A general view was presented of the rack being operated with the hand and the foot.

4. The split screen technique was incorporated with the interpreter translating the spoken instructions.

Conclusions: This media could be used by vocational counselors, vocational teachers, and others concerned with providing vocational training to the deaf.

The use of the split screen technique gives the counselor or teacher an opportunity to communicate in sign language to the client.

PERSONAL ADJUSTMENT

It is evident that it is difficult to completely differentiate between the four areas under which the workshop participants worked in developing materials for the various media. Thus, the payroll check appears as a subject for concern in this section as well as in the occupational information section. The emphasis here, however, is on the explanation and clarification of where the money goes which the worker earns but does not receive.

Demonstration I

Many deaf clients lack understanding of payroll procedures. Often they find their net pay is below what they expected in earnings. They fail to comprehend the deductions involved. This may lead to feelings of being discriminated against and taken advantage of. So this leads to the problem of working with the client to bring about the necessary understandings.

It is necessary to develop teaching aids to assist the client in identifying and understanding work payment procedures. The specific objective, in this case, being familiarization with payroll checks as a source of currency and familiarization of specific sub-items of the check. The gross pay, federal tax, state tax, social security, hospitalization insurance, and, finally, the net pay that the client will receive must be understood by the client.

Assume that the client is ready for employment. He has already found a job: He knows where he is to work and what his wages will be, so, first of all, it is important for the client to understand when he will be paid. He should know he will be paid a certain day each week and at a specific place within the plant. It is necessary for him to fully understand the source of payment and the payroll deductions. A homemade transparency may be produced which is a facsimile of a payroll check. It would be better when actually doing this to attempt to secure an actual payroll check from the company where the client will be employed because the check that he gets might be different from the one that might be used for teaching purposes. He must know that the stub is to be torn off and saved, and that the check is what he takes to the bank or other appropriate place to be exchanged for currency.

It is important for him to know where his money went because at the time he got the job he was told that he would be paid $80.00 a week. The fact is that he may receive only a net of $62.00, so what happened to the other $18.00? It is important that he understand this. After the counselor has gone over the check with the client and he understands when he is to be paid and how much he will have to take home, perhaps it will be necessary to go over with him the payroll deductions so he will know where this money goes and why deductions are necessary.

What is federal tax and why should he pay this? Such words as defense, education, health services need careful explanation if the counselor is dealing with a low verbal deaf client. It might be necessary to use pictures - a missile, a soldier, a school building.

Federal deductions, state deductions, social security - why should his pay be involved? How will certain deductions help him later? He will want to know about hospitalization insurance and it is always important to let the client know that his employer is paying a portion of this for him and that it would be to his benefit to participate in group insurance programs.

Very possibly there may be some professionally made filmstrips dealing with this subject of payroll checks and deductions. Possibly the employer could provide an orientation program of this nature and possibly all the counselor would need to do is go along as an interpreter so that he may be sure the client will receive full benefit from the program the employer offers.

Nearly any media could very well be used. Just be sure it contains the information which must be taught and is presented in such a way that it will be meaningful to the client. In this demonstration, transparencies were utilized.

Demonstation II

Another important area for which materials for use were prepared was learning to use public transportation. A series of transparencies with overlays were demonstrated in the manner the client could be given initial teaching about the amount of money necessary to pay for bus transportation, various combination of coins necessary to equal the correct amount, how to locate the bus stop, identification of the appropriate bus, the use of weekly bus passes, and asking for and using transfers when it is necessary.

OCCUPATIONAL INFORMATION

There are many areas which conceivably might be included under the heading of occupational information. One very important area has to do with check endorsement. Another is to help inform clients of the requirements of specific occupations. Approaches to each of these are presented here to illustrate the adaptability of media for the purposes of assisting clients and to infer that these approaches are amenable to other problem areas as well.

Demonstration I
Payroll Check

Title: Proper Endorsement of Payroll Checks

List of Behavioral Objectives:
General: Properly endorse check every time.
Specific: 1) Identification of front and back of check
2) Identify own name on front of check
3) Correctly write name in proper place on back of check

List of Materials:
1) Programmed booklet
2) Laminated sample checks
3) Filmstrip or slides

Program Outline:
Specific Objective
Use filmstrip or slides to familiarize clients to check endorsing.

Frame 1 Front of check.

Frame 2	Front of check with captioned identification of firm name.
Frame 3	Front of check with captioned identification of employee name.
Frame 4	Front of check with captioned identification of date.
Frame 5	Front of check with captioned identification of amount paid.
Frame 6	Front of check with captioned identification of employer's signature.
Frame 7	Check being grasped on upper right corner.
Frame 8 & 9	Check being turned over.
Frame 10	Back of check.
Frame 11	Back of check in the process of being endorsed.
Frame 12	Back of check with completed endorsement.
Frame 13	Front and back of endorsed check for purpose of matching signature with employee name on front. (Captioned)

Repeat frames for programmed booklet with appropriate test questions. To be used with laminated sample checks for practice.

Demonstration II
Plumber

Objectives: (1) To learn the basic tasks performed by a plumber; (2) to become aware of the advantages and disadvantages of the occupation; and (3) to demonstrate that the understanding has been achieved.

The media involved were transparencies and color slides that illustrate the first two objectives through delineation of the step by step process necessary to become a plumber and the work involved. Other media that might be used include video tape and 8mm film.

There was insufficient time to develop specific suggestions for the third objective, but the need for development of techniques should be evident.

JOB APPLICATION

Effort in this area, for the most part, was confined to methods which might be utilized in teaching clients to complete job application forms. One group did suggest that overhead transparencies could be helpful in preparing the client for the actual job interview, while another prepared a mock interview on video tape and demonstrated how this approach might be useful in helping the client.

Demonstration I

The objective of the video tape demonstration is to improve the job application and job acquisition process by (a) making the client aware of his own behavioral impression on others; (b) assisting the client in self-recognition of specific mannerisms and appearance that are not attractive and a hinderance to employment acquisition; and (c) assisting the client in remedying unfavorable characteristics.

The setting is a rehabilitation center for deaf persons which includes such services as (1) vocational evaluation diagnostics; (2) work adjustment or personal adjustment in an industrial or workshop setting; (3) emphasis on eventual placement in industry with or without additional vocational training. Steps in this particular production demonstrate one way of approaching clients with problems of learning effectiveness in the job interview. The title of this production is, "The Great Job Dilemma."

This is a mock interview for a job application. The participants are a vocational counselor and a client in a role playing situation. The interview is shot without the client's knowledge. It is designed to help the client discover his strengths and weaknesses.

After the initial interview process, the client observes a rerun of the interview process so he can observe himself on tape. The client and counselor view the interview; the client lists his faults as he observes himself. He initiates corrective behavior. There is some discussion as to ways of improving the client's approach.

The Evaluation - While the technical skills of the participants resulted in many shortcomings in this demonstration method, the use of video tape for the specific objective was indicated to have merit. A video tape provides an innovative and startling experience to most deaf clients. It provides a face-saving means of recognizing shortcomings because the psychological effect of a confrontation by the counselor is avoided.

Demonstration II

Objective: To make out applications.

It was thought the best plan would be to start out with something simple. The group is aware that sometimes it is possible to alienate people by starting out with too simple a presentation. But this approach was intended to serve as a starter for clients who have little or no knowledge of what is going on.

The first transparency would only present the directions to print and give an example of printing so that the client would know what he is expected to do. This would be supplemented by providing a working copy of the same thing for the client. The copy may be produced on the Thermofax machine and tends to serve two purposes - it gets something in the hands of the client and from what the client does the counselor will have an idea for future work on applications.

The second step was to develop approaches by which the counselor could demonstrate some of the different ways of asking the same questions. An actual application was utilized and a transparency was made of it. The upper right hand corner, where the social security number is placed was color coded in green. By using color and keeping the code consistent from one form to other different forms, it was felt a better understanding would be engendered and that eventual transfer would occur. A number of applications would be used to show the different methods of asking for the social security number. On each application the area would be outlined in green. Red was used in the same way for information related to marital status, blue for educational background, etc.

It was felt that the process should begin with an application or applications that do not require much information. Using this method, the counselor and client would go through one at a time, depending, of course, on what the client can do and the speed with which he gains competence. Sources are local businesses to provide sample applications so that they may be used in training as necessary.

Demonstration III

Objective: To complete job application, following printed directions which include writing information in the appropriate sections of applications and listing educational and work histories in correct sequence.

The materials to be used would be 8mm loop films with a linear program book. The open-end film would be used after the program mainly for discussion purposes and to supplement the program and 35mm slides for vocabulary instruction.

The method of using the media would be first to look at the loop film and practice with the program book. Then the person would be asked to fill out job applications without the program. Then the counselor would evaluate the results. If necessary, the client would then be asked to repeat the program. Finally, the counselor and client would use the film or slides for discussion bases.

COMMITTEE REPORT ON MATERIALS EVALUATION

Media evaluations are probably rather meaningless unless they are well grounded in the understanding of the tasks they are expected to perform. Thus, the committee on materials evaluation spent relatively little time in trying to evaluate the sample media made available at these sessions. The committee's time was taken up mainly with the more basic problems of functionally defining what should be considered in the evaluation and production of media for use by the vocational counselor whose job it is to work with the multiply handicapped deaf person.

The committee attempted to define some significant factors that might be considered in the evaluation of materials. Some attention was given to equipment that might be appropriate for the person in the vocational rehabilitation setting whose job it is to work with the deaf, especially the multiply handicapped deaf person. As a committee project, a representative evaluation form was developed. The form was designed for the vocational counselor to use in building up his own resource file of materials appropriate to his local situation.

Other factors considered were related to equipment. Although this was not a specified responsibility, it is something that is important. Initial cost is often a major factor as is operation expense. Portability is an important factor as many counselors find themselves on the road a great deal. The availability and adaptability of the equipment, the suitability, and major purposes for which a counselor might use materials and equipment are important when thinking in terms of training, group counseling, individual counseling, and presentations to large audiences, as well as others.

Another important point has to do with the level of technical know-how that one might need to operate such equipment. Another is the time factor in terms of operation, preparation, setting up of equipment. One thing that some of us might not consider is the question of whether this equipment might interfere with the counseling process. Does it require more attention than the client? Does the equipment create a physical situation in which communication might be difficult?

Some of the considerations were relative to materials that might be appropriate for use by the counselor such as the currentness of the material, the adequacy of the presentations that can be effected with the material, the appropriateness for a particular situation, the availability aspects of the material (whether it can be produced locally or must be purchased and where it can be acquired).

Among the suggestions the group wished to make relative to immediate action is one heard frequently, which is that suggestion relative to a clearing house for the compilation and dissemination of information regarding available media. This might include a central index of available materials. It also might include such things as regular bulletins to keep the counselor up to date on new media developments. Another suggestion for immediate action would be the establishment of some sort of priority status that might be given to the development of materials that will interpret the rehabilitation process for the deaf client. Frequently counselors are concerned because deaf people just do not know or understand what the rehabilitation counselor is able to do to help them.

Another area that needs consideration is the possibility of arranging for some experts in the area of material and material production to be available to rehabilitation counselors to assist them in acquiring, evaluating, and using media. It appears presently that equipment is far ahead of material in terms of availability. Support is needed, both financial and otherwise, for the development of adequate materials for use with the technological equipment currently available.

Among projects was that of writing a brief representative evaluation form. If one were to attempt to evaluate media in a comprehensive manner, a whole battery of forms would be necessary - some quite lengthy and some quite complicated. The thing that has been attempted, was to design a representative form, certainly not prescriptive and not meant to be comprehensive, but one which might be used for compiling information for your own use. (Appendix A) The form seeks to establish information relative to what the material is, where to get it, and what it costs. A brief profile helps to rate the teaching guide, if available; the accuracy of the material; its technical quality; the suitability of the material for self-instruction; the necessary reading level; the major uses of the material; and additional notes.

We would like to emphasize here that one of the important things about media is feedback: What sort of impact did it have on the client when used? Do you wish to use it again? For what situations would you want to use it again?

Appendix B is a brief listing of some resources. These mainly are general in nature and include film sources, some catalogs of inexpensive materials and free materials, some special references, and some areas you might wish to look into in your local community.

There is one kit of which you should be aware which will be on the market before long. This kit was not made specifically for use with deaf clients but it may have great application. It consists of fourteen filmstrips relative to preparation for job and introduction to job opportunities. It has sample application forms that are laminated so that you can write on them, wipe them off and use them again. It has other materials such as a little booklet Preparing Yourself for Job Interviews, some sample forms for the client to practice writing references, and study guides for the filmstrips. The kit is a rather comprehensive package of materials. It was developed in Minnesota and will be available from:

Mr. Vernon Schultz
School Rehabilitation Program
Horace Mann School
Highland Park
St. Paul, Minnesota

One more item. If you are not aware of it, the February, 1968 issue of American Education contains a comprehensive listing of available federal monies for which you or your agency might be eligible. It may be well worth your while to review this information to investigate the possibility of writing a proposal to secure funds which will help you in the development and improvement of your programs.

APPENDIX A

REHABILITATION MEDIA EVALUATION REPORT

Title:______________________________ Source:____________ Cost:_______

Medium:____________________________ Address:____________________

Description:____

Evaluation
Profile

5 4 3 2 1 1. Appropriate for use with young adults or older:
______Yes ______No

5 4 3 2 1 2. Teaching Guide (if available).

5 4 3 2 1 3. The material is accurate and up-to-date.

5 4 3 2 1 4. The quality of photography or art work.

5 4 3 2 1 5. Suitability of material for self-instruction.

6. Educational level for which material is best suited:
______Literate ______Semi-literate ______Illiterate

7. Major uses of the material:

______Research ______Staff Training

______Client Training ______Public Relations

______Self-Instruction ______Group Counseling

______Vocational Orientation Training

APPENDIX B

SOME GENERAL FILM SOURCES

Association Films, Inc. *
324 Delaware Avenue
Oakmont, Pa. 15139

Modern Talking Picture Service *
1212 Avenue of the Americas
New York, New York 10036

United World Free Film Service *
221 Park Avenue South
New York, New York 10003

Captioned Films for the Deaf
U. S. Office of Education
Washington, D. C.

* Distributors have regional centers, find the one nearest your home or school.

Free except for 25¢ or 50¢ postage and insurance fees. Write for catalogs.

SOME CATALOGS OF FREE OR INEXPENSIVE MATERIALS

Educator's Progress Service
Randolph, Wisconsin 53956

Films, Filmstrips, Tapes, Printed Materials.

Write for brochure of catalogs. Catalogs cost $6.00 to $8.00 each. You will probably be most interested in those dealing with GUIDANCE, FILMSTRIPS AND FILMS. Revised annually.

FREE AND INEXPENSIVE LEARNING MATERIALS

George Peabody College for Teachers
Nashville, Tennessee

$2.00, Revised every two years.

SOURCES OF FREE AND INEXPENSIVE EDUCATIONAL MATERIALS

Ester Dever
P. O. Box 186
Grafton, West Virginia 26354

$5.25, Revised irregularly.

SOME SPECIAL REFERENCES

Reports of the Workshop for Improving Instruction for the Deaf. (Personal and Social Adjustment, Consumer Education, and Sex Education, all published in 1965 and Vocational Education, 1967.) Write to:

Howard Quigley, Executive Manager
Captioned Films Educational Media Center
6115 MacArthur Boulevard, N. W.
Washington, D. C. 20016

Educational Media Index
McGraw-Hill Book Company
New York, New York

SOME GENERAL SOURCES OF FREE MATERIALS

Telephone Companies
Local Manufacturers
Local and state health and welfare agencies
State vocational rehabilitation offices
Libraries - city, state university
Departments of Education - city schools, state
Schools for the Deaf
Chamber of Commerce - Speaker's Bureau
Film rental agencies sometimes have free films - see the
Yellow Pages in your telephone book.

PANEL REACTIONS AND COMMENTS

Edna Adler
Edward Carney
Delams Young

Delmas Young

The title of the workshop, as you may recall, indicated that we were to be concerned with multiply handicapped deaf people. We were chatting here in front as we viewed the presentations and we were a little disappointed that we heard "multiply handicapped deaf" only once. Also, in setting the objectives for the materials that were prepared, we noted there was neglect in the area of thinking about a particular individual and the problems of this particular individual before setting the objectives and preparing the material. We felt, in general, that we may have been neglecting the multiply handicapped deaf to a large extent and have strayed away from the intent of the workshop in general and we want to, in some way, bring attention back to the area in which it was really intended to be.

I noticed my distinguished colleagues here taking notes profusely, during this, so I think the way we will handle it is to start with some questions I would like to put to them first and then we will give them an opportunity to more or less summarize their thinking and reactions.

The first question that I have would be directed to both and is this:

Do we have any material and/or equipment that can be used specifically with the multiply handicapped deaf?

Edna Adler

I think we do. For example, the following materials have been developed. I am not certain all are available, but it would be possible to write to the appropriate people to determine whether they are available:

Mrs. Gallagher Attlewood
18 Oakview Court
Pleasant Hills, California 94523

(A book for use with multiply handicapped deaf people which stresses vocabulary development and simple sentence construction.)

Mrs. Jean Sellner
1337 Lawrence Street
El Cerrito, California 94530

(Drawings of common objects. Designed for vocabulary development with multiply handicapped deaf adults. Quite comprehensive.)

Michigan Rehabilitation Institute
Pine Lake, Route 13
Plainwell, Michigan 49080

(Edna Adler. Social and Occupational Adjustment for the Young Deaf Adult.)

Delmas Young

When Group VI made their presentation, we saw an example of a group of single concept films. I would like to direct this same question again to Ed regarding materials and equipment, particularly for multiply handicapped deaf. While some of those films probably could be used, I am wondering if Captioned Films has anything specifically designed for use with multiply handicapped deaf people.

Edward Carney

No, not at the moment. And that was the precise reason for our support of this workshop. There is a dire need for visual media and we are not prepared in the way of time and personnel to wrestle with the specifics. My own personal experience before I got into Captioned Films work was with the multiply handicapped deaf and I look back and know from my own sad experience how much I could have profited from well planned visual media. At this time, we are in the process of preparing material that can be used by your people in the field but we have just begun to scratch the surface. My reaction to some of the presentations here is that I think you will agree with me when I say there is a need for preparation of materials in depth. Basic concepts can be developed with a multi-media approach; there are things that can be used with all the different media that we have in use, depending on the needs in the work situation and, in your work situation, your individual problems.

There are many problems that all of you are faced with and some of you are faced with unique situations. But at this moment, except for some of the films you saw, there aren't very many suitable materials available for use with multiply handicapped deaf clients. You have to have people on a higher mental level for profitable use of the IBM programs, for example. The loop films, on the other hand, may help you to teach attitudes, improvement of attitudes, and to demonstrate problem situations your clients will find themselves in later and with which they will have to contend.

We have just begun and we need to act.

Delmas Young

Despite some reservations, I have to admit that we saw some very, very good material this afternoon. I am thinking now in particular of Group II, the sub-group that prepared a plan for a film strip regarding endorsement of payroll checks. This appears to me to be a very good plan and a particular counselor, if he had this in mind as a need in his work, could very well take the slides, the photographs. But the presentation was also in terms of developing a film strip, probably one with captions. Now, if anyone in the field had an idea and developed this idea to the extent possible, would either of the agencies involved, RSA or Captioned Films, be able to assist or carry this work on and develop it?

Edward Carney

My suggestion is that perhaps the Professional Rehabilitation Workers with the Adult Deaf could serve as a clearing house for ideas of this nature; perhaps set up committees to handle various phases of ideas. One committee, perhaps to work on film strips, and another to work on transparencies and so forth. Captioned Films would be willing and able to work with development of materials that you need, but we can't go at this piecemeal. Meantime there has to be some long range planning. Our money is spent about two years ahead right now. However, we could, for example, if somebody had a film that they made themselves, help with the editing and, if the negative were made available to us, we could and would make prints and distribute the prints, perhaps on an open end loan basis.

The idea of one film strip at a time would not be feasible. It would work out better if you would develop plans, and I say that deliberately because I say again we do not have the time nor the people to wrestle with individual problems of that nature in Washington. It would have to be done in the field. If somebody came up with a proposal to Captioned Films with a long range project to develop a whole series of film strips or transparencies and so forth, we would listen, but one at a time we just couldn't cope with.

Delmas Young

This last question involves some of the materials that are bound to come from different individuals and different agencies; ideas that come from different individuals and different agencies: Do you feel that some agency ought to be responsible to act as a clearing house for materials, equipment, ideas, concerning things we can use with the multiply handicapped deaf and if so, what agency or agencies do you believe might be able to handle this, or could handle it, or would handle it?

Edna Adler

It seems from the way things have gone up to now Captioned Films would be the appropriate agency for that. It is working in the direction of developing plans for providing assistance in the areas of adult education. It may be possible that Captioned Films would serve in some way to act as a clearing house or to encourage another appropriate agency to do so and to work with it.

Edward Carney

As you have seen here, we have some real professionals in our regional centers and I feel that between our field offices and our Washington office we can be of great help to you. I cannot say point blank that we can assume all responsibility, but as Edna mentioned, there is to be given more time and attention to and, hopefully, plans for adult programs developed under the Captioned Films program. We have been slanted to the elementary school level for a long time and we are beginning to close that gap. Now we want to give more help to the group of people who are helping the adults.

SUMMARY

INTRODUCTORY COMMENTS

Edward C. Carney

Some of you were at the workshop in St. Louis when I discussed Captioned Films for the Deaf and asked for some feedback from the field to help us establish guidelines. In our deliberations and staff meetings in Washington, frequently I am out-numbered by the school people. I am not opposed to school people, I used to be one myself, but I also was in rehabilitation work and I am more inclined to think of your needs. But if more members of the staff have a stack of letters saying the schools need this and this and this, and I have one letter saying rehabilitation people need this and this and this, then I have little or no chance to help you. So I want to ask of you, let us know what your needs are. I don't say that we are going to give you everything you ask for, we would like to, but it will help us greatly in our planning for both software and hardware.

We want to know not only what your needs are but, if you have used media, what sort of success you have had so that we might be able to serve as a clearing house for information, appraise materials and results, pass on such information and use the office to help build up your programs utilizing the experiences of others. One weakness in our field is the lack of communication between individuals, since we are scattered so far and wide. I will be glad to help as much as I can.

I talked yesterday about the fact that Captioned Films for the Deaf is planning to branch out in the area of adult programs. I will be reassigned to that responsibility. I will still have responsibility for the overall supervision of the circulation of films and other media, but I will be able to concentrate on adult programs, which includes your work. Thus, the more you let me hear from you the better off we may be. I cannot promise you that we will have the money to set up another workshop like this in the near future. It would be ideal. It is a wonderful place to exchange information. You have an opening, if you will write to us.

RECOMMENDATIONS

The following is a summary of the recommendations which were arrived at in the various group discussions. Some of the recommendations represent a consensus while others may have come out of but one or two of the group discussions.

RECOMMENDATION: Overhead projectors should be provided for every rehabilitation counselor working with multiply handicapped deaf clients.

RECOMMENDATION: Materials for use with overhead projectors should be developed, whether by individuals or media centers, and made available through the media centers on a regional basis.

RECOMMENDATION: Workshops designed to teach the use of hardware and techniques in the development of software should be arranged for and provided by Captioned Films for the Deaf. Personnel who should be engaged in these workshops include the rehabilitation counselors and appropriate administrative personnel.

RECOMMENDATION: 35mm slides should be developed and made available on a regional basis. These slides should be developed by individual counselors and media personnel as is feasible.

RECOMMENDATION: Media centers should have rehabilitation personnel available on a consultancy basis or as a regular staff member.

RECOMMENDATION: Single concept films should be developed which deal with the various aspects of the vocational rehabilitation process and for use in counseling and guidance situations. There should also be films developed which are suitable for self-instruction purposes in training.

RECOMMENDATION: Information relating to local and regional facilities should be made available to rehabilitation personnel. This includes the four Regional Media Centers and the fourteen Instruction Material Centers.

RECOMMENDATION: A media manual setting forth guidelines for the development and use of software and hardware should be developed for use by counselors.

RECOMMENDATION: Specific areas should be pinpointed in which materials are needed by vocational rehabilitation counselors serving multiply handicapped deaf clients.

RECOMMENDATION: Software should be developed which may be used for the purpose of orienting parents and other family members as to the nature and needs of multiply handicapped deaf persons.

RECOMMENDATION: The use of various media to introduce a client to an employer should be investigated to determine whether this technique is practical and/or effective. It is suggested such an approach could be more economical in terms of time, for both the counselor and the various employers with whom he comes in contact.

RECOMMENDATION: There should be follow-up workshops involving smaller numbers of people who may focus on specific problems and work towards development of media which can be used in attacking these problems. Participants in such workshops will be able to share whatever materials they may have already been able to develop or which may be adaptable to one form of media or another.

RECOMMENDATION: Captioned Films for the Deaf should be encouraged to assist in providing the hardware for counselors, especially in the vocational rehabilitation centers.

RECOMMENDATION: A portable kit should be defined and designed for use by the vocational rehabilitation counselor in the field. This would be, primarily, the hardware.

RECOMMENDATION: The Professional Rehabilitation Workers with the Adult Deaf should be encouraged to establish a coordinating service or committee to facilitate the development and distribution of software materials.

RECOMMENDATION: Universities and colleges having programs in rehabilitation counselor education should be encouraged to include courses in the use of media in the rehabilitation process.

SUMMARY RECOMMENDATION: RSA and CFD should be encouraged to work cooperatively wherever practicable in implementing the recommendations of this workshop.

In addition to the recommendations listed above, a number of comments came out of the group discussions which are germane to the proceedings and results of the workshop.

It was noted that several groups were concerned with cost related factors. Many or most of the participants had no idea as to the cost which might be involved when considering purchase of various media hardware. As a result, the feeling was that such information should be gathered and disseminated so that a realistic cost basis could be taken into consideration when planning for incorporation of media into existing rehabilitation programs and centers.

There was evidence in the group discussion summaries of the fact that the pursuit for software should not be confined to effort within the disability area of deafness alone. Other areas, it was noted, may have much to offer, e. g., the anti-poverty programs, the area of work with the blind, mental illness, mental retardation, and others. Such materials as may have been developed may not always be suitable, but there may be many materials which are adaptable.

A further point which was developed in a number of groups concerned utilization of materials in the opposite direction. Material developed by people in rehabilitation programs and centers may be of value to other programs such as the programs in mental health facilities typified by Rockland (N. Y.) State Hospital, in community service agencies similar to the programs in Wichita, Kansas City, Los Angeles, Seattle, and other cities which will have such programs in the future.

There seemed to be a general feeling that through appropriate utilization and interchange of materials, better community relations might be developed and that other service agencies such as welfare and employment services may be encouraged to cooperate and interact to the mutual benefit of the multiply handicapped deaf person and the agencies which propose to serve him.

Overall, the general agreement seemed to be that it is necessary to define the needs in specific terms which relate to the multiply handicapped deaf client and the person(s) working with him, to get down to the job, "tool-up," and do what must be done.

WORKSHOP SUMMARY

Gordon C. Haygood
Assistant Regional Representative
RSA, Region IV

I have made notes throughout this institute and have personally been challenged by what I have seen and heard. However, at this point in time a lengthy speech is not what I feel you want or need. So I would like to share only a couple of thoughts or impressions with you in this summary.

First, I feel that throughout this institute the message has come through that media is a tool, not a totality; a resource, not a replacement. That is, media is not the end but an effective and efficient means of improving the delivery of services we have to deliver. It can and it should be a tremendous asset in this very critical area with its professional man power shortages. I would hasten to repeat a word of caution; media is a resource and not a replacement.

We have been challenged by our keynoter's comments as well as by the papers on Tuesday afternoon related to industry and the mental retardation program in St. Louis, the Show and Tell session of yesterday, and, of course, the results of the discussions of this morning. There are applications of media all around us if we will but seek them out and carefully assess their applications to the vocational rehabilitation process.

We were challenged to survey industry and the multitudinous applications of media they already have made. We should look at other related programs and their research and demonstration activities such as was exemplified by the MR presentation on Tuesday. Let us look at the vast programs in education. In other words, if they can do it, why can't we? Methods have been tried, revised, tried again and finally success has often been realized.

I feel it is time for us in Vocational Rehabilitation to innovate drastically, to be creative in our thinking and to be willing to make a mistake now and then, but to have as our heart-felt slogan, as does number two in the auto rental industry, "We try harder."

Secondly, I feel this institute is extremely timely. I might add that I hope these proceedings will not take two years to produce as did the Institute on Casework Practices The need is great and we would like to get these in our hands. By the way, the *Institute on Casework Practices Proceedings* is an excellent document and if you have not done so, take the time to go through it.

There are a number of factors today which are having and will have even more of an effect on the future role and responsibility of Vocational Rehabilitation. Not the least of these is the recent reorganization within the Department of Health, Education, and Welfare that has already been mentioned this morning. We hear a great deal about government and all of its reorganizations with some resultant confusion about bureaucratic systems. Nevertheless, the new Social and Rehabilitation Services with Miss Mary Switzer as administrator promises to really draw closer together and up-grade its many programs and, more importantly, redirect the priorities within the component agencies in order to ensure improved services at the community level.

Some of the factors within this reorganization that are going to affect us directly include the implementation of Title XIX of the Social Security Act (Medicaid); the realigning of the service component of the welfare program; the transfer of the mentally retarded program to Rehabilitation Services Administration; and the very close coordination between Crippled Children's Services and Vocational Rehabilitation.

I would like to comment briefly on Mr. Galloway's comments about services from the cradle to the grave. We are hoping that this is not too far off in the future. But right now, unfortunately, we still must identify this vocational component. We are hoping we can work with Crippled Children to the extent that all needed services will be provided.

All of this will have a dramatic effect on Vocational Rehabilitation. Other activities such as the U. S. Department of Labor legislation dealing with the CEP program, NBTA, Work Incentive, the Social

Security amendments, Model Cities, Comprehensive Health Planning, and on and on I could go, are factors which will affect our future. They will precipitate changes in come of our age-old practices, some of which may not have been too good anyway.

We are proud to say, however, that this old process known as the Rehabilitation Process will survive. As a matter of fact, other programs are attempting to copy it. The Office of Economic Opportunity, the Labor Department, the CEP program, even the Model Cities program are attempting to do an evaluation, write up a plan for the provision of services, provide these services, and rehabilitate cities as well as people. This is the Rehabilitation Process. We in Vocational Rehabilitation are moving away from the "quickie" case and concentrating more and more on the difficult cases, such as the multiply handicapped deaf; the subtle disabilities; behavioral disorders.

With this move, I see more and more need for comprehensive services provided through quality resources. What better method could be used than appropriately adapted media? No longer can a counselor retreat and say, "Not feasible for VR services." Through extended evaluation he must now document specifically his decision of, "Not Feasible." I am sure that in the process of documentation many cases will be found to be feasible and through the development of quality resources and services will be successfully rehabilitated.

Now, all of this costs money - from whence will it come? I do not propose to know the answer to this, but, there are vast resources that have not been tapped nearly enough for programs for the deaf.

As an example, let's take this area of media. Programs in this area, with certain conditions, would be eligible for funds under six different funding resources that I can think of right off in Vocational Rehabilitation alone. Section II funds with 75% federal matching; Innovation funds with 90% federal matching; Expansion funds with 90% matching; if facilities are located in a workshop for evaluation or training, Workshop Improvements grants with 90% funding. Technical assistance in the development of these programs with 100% federal funding is available and I am sure many programs would qualify for our research and demonstration funds.

We have a challenge before us. We have been exposed to a whole host of new ideas and adaptations. We know our needs based on the needs of our individual clients. It is up to us to take it from here.

I would like to close with a little verse which I think is quite appropriate:

. Did is a word of achievement;
. Want is a word of retreat;
. Might is a word of bereavement;
. Can't is a word of defeat;
. Ought is a word of duty;
. Try is a word of each hour;
. Will is a word of beauty;
. Can is a word of power.

PLANNING COMMITTEE AND WORKSHOP ROSTER

PLANNING COMMITTEE

Edna P. Adler
Edward C. Carney
W. Ed Davis
Roger M. Frey
B. Robert Gonzales
W. Lloyd Graunke
William D. Jackson
Glenn T. Lloyd
Albert T. Pimentel
George Propp
L. Deno Reed
Lester C. Stanfill
Boyce R. Williams
William E. Woodrick

CO-DIRECTORS

William D. Jackson
William E. Woodrick

EDITOR

Glenn T. Lloyd

GROUP LEADERS

Virgil Flathouse
DePaul University
Institute for Study of Exceptional
Children and Adults
2322 North Kenmore Avenue
Chicago, Illinois 60614

Victor H. Galloway
Graduate Assistant in Research
Rehabilitation Center
University of Arizona
Tucson, Arizona 85721

Doin Hicks, Ed. D.
Pilot School for the Deaf
4907 Cedar Springs
Dallas, Texas 75235

Albert T. Pimentel, Executive Director
Registry of Interpreters for the Deaf
2025 Eye Street, N. W.
Washington, D. C. 20006

E. Ross Stuckless, Ph. D.
Director, Research and Training
National Technical Institute for
the Deaf
Rochester Institute of Technology
P. O. Box 3514
Rochester, New York 14614

Norman L. Tully
Coordinator - RCD Program
Rehabilitation Center
University of Arizona
Tucson, Arizona 85721

RECORDERS

William G. Chrisman, Jr., Counselor
Woodrow Wilson Rehabilitation Center
Division of Vocational Rehabilitation
Fishersville, Virginia 22939

Willis A. Ethridge, Director
Counseling and Community Services
Center for the Deaf
300 Swissvale Avenue
Pittsburgh, Pennsylvania 15218

Betty P. Holdt, Director
Program in Counseling the Deaf
Oregon College of Education
Monmouth, Oregon 97361

Arthur G. Jillette, Jr.
Associate Research Scientist
School of Education
New York University
Washington Square
New York, New York 10003

Robert K. Lennan
California School for the Deaf
3044 Horace Street
Riverside, California 92506

George Saiki, Teaching Assistant
Rehabilitation Counselor
Education Program
University of Tennessee
Knoxville, Tennessee 37916

INTERPRETERS

Connie Barnes
P. O. Box 105
Talladega, Alabama 35160

Lillian Beard
107 Forest Cove Drive
Route 3
Humble, Texas 77338

Don England
609 Hal Street, N. W.
Huntsville, Alabama 35805

Fannie Lang
45 Betsy Lane
Ambler, Pennsylvania 19002

Tom Lawrie, Counselor
Evaluation Center for the Deaf
Box 295
Cave Spring, Georgia 30124

Helen Trentham
First Baptist Church
510 West Main Street
Knoxville, Tennessee 37902

GUESTS

David Booker, President
Knox Chapter of Tennessee
Association for the Deaf
601 Ozark Circle
Knoxville, Tennessee 37912

Thomas L. Duke, President
Tennessee Association of the Deaf
1210 West End Avenue
East Ridge, Tennessee 37212

Robert W. Lange, President
Gallaudet College Alumni Association
2147 Berea Avenue
Knoxville, Tennessee 37920

O. E. Reece, State Director
Division of Vocational Rehabilitation
1717 West End Building
Room 615
Nashville, Tennessee 37203

Hilton A. Smith, Ph. D.
Vice President for Graduate
Studies and Research
The University of Tennessee
Knoxville, Tennessee 37916

Charles Trentham, Ph. D.
Pastor
First Baptist Church
510 West Main Street
Knoxville, Tennessee 37902

James H. Waynick, Counselor
Division of Vocational
Rehabilitation
1701 - 21st Avenue
Nashville, Tennessee 37212

PARTICIPANTS

Syed Abdullah, M. D.
Senior Psychiatrist - Deaf Unit
Rockland State Hospital
Orangeburg, New York 10962

Faye Adams, Evaluator
Yarbrough Rehabilitation Center
Central State Hospital
Milledgeville, Georgia 31061

Edna P. Adler, Specialist
Deaf and Hard of Hearing
Rehabilitation Services Administration
Washington, D. C. 20202

David Altschuler
Project Coordinator
New York Society for the Deaf
344 East 14th Street
New York, New York 10003

Richard L. Babb
Teacher of Mentally Defective Deaf
Porterville State Hospital
P. O. Box 2000
Porterville, California 93257

John C. Barner, Counselor
Sunnyview Rehabilitation Center
1270 Belmont Avenue
Schenectady, New York 12308

Albert Berke
Teacher-Consultant for the Deaf
Rockland State Hospital
Orangeburg, New York 10962

James A. Bitter, Director
Work Experience Center
Jewish Employment and
Vocational Center
St. Louis, Missouri 63103

Peter M. Blackwell, Principal
Rhode Island School for the Deaf
520 Hope Street
Providence, Rhode Island 02906

Gary D. Blake, Coordinator
Services for Adult Deaf
Hot Springs Rehabilitation Center
P. O. Box 1358
Hot Springs, Arkansas 71901

George H. Bond, Rehabilitation
Counselor - Deaf
Rhode Island Division of
Vocational Rehabilitation
40 Fountain Street
Providence, Rhode Island 02903

Nora Burrows, Research Assistnat
University of Pittsburgh
Department of Special Education
and Rehabilitation
School of Education
Pittsburgh, Pennsylvania 15213

Raymond Butler
Vocational Principal
North Carolina School for the Deaf
Morganton, North Carolina 28665

Edward C. Carney
Education Officer - Distribution
Captioned Films for the Deaf
U. S. Office of Education
Washington, D. C. 20202

Thelma Casey
Vocational Evaluator
Hot Springs Rehabilitation Center
P. O. Box 1358
Hot Springs, Arkansas 71901

Edmond D. Cassetti, Director
Vocational Education
American School for the Deaf
139 North Main Street
West Hartford, Connecticut 06091

Donna Chapman
Southwest Regional Media Center
for the Deaf
Box AW, University Park Branch
Las Cruces, New Mexico 88001

William T. Darnell, Psychologist
New York State School for the Deaf
713 North Madison Street
Rome, New York 13400

Henry Daum, Executive Director
Rehabilitation Center and Workshop
319 Eagle Street
St. Paul, Minnesota 55102

W. Ed Davis
Minister to the Deaf
First Baptist Church
510 West Main Street
Knoxville, Tennessee 37902

Nyna Sue Dement, Counselor
Deaf and Hard of Hearing
Division of Vocational Rehabilitation
1812 University Avenue
180 Griggs-Midway Building
St. Paul, Minnesota 55104

Sal DeFrancesca, Psychologist
Jewish Employment and
Vocational Services
1727 Locust Street
St. Louis, Missouri 63103

Robert J. Donoghue
Project Psychologist
Jewish Vocational Service
1 South Franklin Street
Chicago, Illinois 60606

Patricia A. Dow, Coordinator
Deaf and Hard of Hearing
New Hampshire Hospital
105 Pleasant Street
Concord, New Hampshire 03301

Earl Elkins, Rehabilitation Counselor
State Department of Labor
Room 207 - Box 1151
Raleigh, North Carolina 27602

Jack English, Counselor
Hot Springs Rehabilitation Center
P. O. Box 1358
Hot Springs, Arkansas 71901

Roger Falberg, Director/Counselor
Community Service Agency for
the Deaf
Kansas City General Hospital and
Medical Center
Kansas City, Missouri 64108

Roger M. Frey, Ed. D.
Professor and Head
Department of Special Education
and Rehabilitation
University of Tennessee
Knoxville, Tennessee 37916

Mervin D. Garretson
Executive Director
Council of Organizations
Serving the Deaf
4201 Connecticut Avenue, N. W.
Washington, D. C. 20008

Gary J. George
Rehabilitation Counselor
Division of Rehabilitation Services
7101 South 17th Street
Lincoln, Nebraska 68502

E. Jack Goforth, Technical Assistant
Southern Regional Media Center
for the Deaf
University of Tennessee
Knoxville, Tennessee 37916

B. Robert Gonazles, Coordinator
Teacher Training Program for
the Deaf
Department of Special Education and
Rehabilitation
University of Tennessee
Knoxville, Tennessee 37916

W. Lloyd Graunke, Ph. D.
Superintendent
Tennessee School for the Deaf
Island Home Boulevard
Knoxville, Tennessee 37920

E. Kendell Hanks, Student
University of Tennessee
Knoxville, Tennessee 37916

James H. Hanson, Consultant
Deaf and Hard of Hearing
Iowa Division of Rehabilitation
Education and Services
801 Bankers Trust Building
Des Moines, Iowa 50309

Gordon C. Haygood
Assistant Regional Representative
Rehabilitation Services
Administration
50 Seventh St., N. E., Room 404
Atlanta, Georgia 30323

Jack H. Haynes, Coordinator
Rehabilitation Center for the Deaf
309 West Walworth Avenue
Delavan, Wisconsin 53115

Perry Hensley, Executive Director
Illinois Division of Vocational
Rehabilitation
623 East Adams Street
Springfield, Illinois 62701

Marshall S. Hester, Project Director
Southwest Regional Media Center
for the Deaf
Box AW, University Park Branch
Las Cruces, New Mexico 88001

Andrew Hnatow, Instructor
Michigan Rehabilitation Institute
Pine Lake
Plainwell, Michigan 49080

James S. Howze
Demonstration Teacher
Southern Regional Media Center
for the Deaf
University of Tennessee
Knoxville, Tennessee 37916

Fred Hughston
Assistant Director of Trades
Alabama Institute for the Deaf and Blind
P. O. Box 268
Talladega, Alabama 35160

Henning C. F. Irgens, Deaf Consultant
Michigan Rehabilitation Institute
Route 3
Plainwell, Michigan 49080

Carl M. Isbell, Counselor
Vocational Rehabilitation Division
Box 1689
Jackson, Mississippi 39205

William D. Jackson, Ed. D., Director
Southern Regional Media Center for
the Deaf
University of Tennessee
Knoxville, Tennessee 37916

Charles Johnson, Rehabilitation Counselor
Vocational Rehabilitation Service
P. O. Drawer 17
Talladega, Alabama 35160

Mildred Johnson, Counselor
Coordinating Council on Vocational
Education
Box 3126
Seattle, Washington 98114

Alan B. Jones, Project Director
A. R. C.
7979 Old Georgetown Road
Washington, D. C. 20014

Robert Lauritsen, Counselor
Division of Vocational Rehabilitation
1821 University Ave., Room 180
St. Paul, Minnesota 55104

Clifford A. Lawrence, Director
Deaf Adult Project
927 Washington Street
Boston, Massachusetts 02111

Mrs. Tom Lawrie, Evaluator
Evaluation Center for the Deaf
Box 295
Cave Spring, Georgia 30124

Charles W. Leman
Michigan School for the Deaf
West Court Street
Flint, Michigan 48502

J. Bruce Leonard, State Supervisor
Services for the Deaf
Division of Vocational Rehabilitation
Morganton, North Carolina 28655

Edna S. Levine, Ph. D.
Professor of Educational Psychology
Director, Center for Research and
Advanced Training in Deafness
Rehabilitation
New York University
New York, New York 10003

Glenn T. Lloyd, Coordinator
Deaf Education
University of Tennessee
Department of Special Education and Rehabilitation
College of Education
Knoxville, Tennessee 37916

George G. McFaden, Director
Department of Adult Blind and Deaf
P O. Drawer 17
Talladega, Alabama 35160

Dorothy S. Miles, Teacher/Counselor
Jewish Employment and Vocational Service
1727 Locust Street
St. Louis, Missouri 63103

Robert L. Miller, Vice President
Board of Directors
The East Bay Counseling and Referral Agency for the Deaf
P. O. Box 712
Berkeley, California 94701

Dan Misenheimer, Rehabilitation Counselor
1304 East Wendover Avenue
Greensboro, North Carolina 27405

David W. Myers, Consultant
Indiana Division of Vocational Rehabilitation
701 Illinois Building
Indianapolis, Indiana 46204

Yale S. Nathanson, Ph. D.
Consulting Psychologist
Bureau of Vocational Rehabilitation
2048 Pine Street
Philadelphia, Pennsylvania 19103

Donald A. Neumann
Vocational Instructor
Arizona State School for the Deaf and the Blind
Tucson, Arizona 85703

Elia G. Nickoloff
Acting District Supervisor
Division of Vocational Rehabilitation
402 Minot Federal Savings & Loan Bldg.
Minot, North Dakota 58701

Arthur G. Norris
Proposal Administrator
Vitro Laboratories
14000 Georgia Avenue
Silver Spring, Maryland 20910

Terrence O'Rourke, Director
National Sign Language Project
National Association of the Deaf
2025 Eye Street, N. W.
Washington, D. C. 20006

Joseph Panko, Media Specialist
Northeast Regional Media Center for the Deaf
Amherst, Massachusetts 01002

John Parsons, Supervisor of Services for the Deaf and Blind
2129 East South Boulevard
Montgomery, Alabama 36111

James L. Perry, Chief Evaluator
Evaluation Center for the Deaf
Box 217
Cave Spring, Georgia 30124

Eugene W. Peterson, Counselor
Crossroads Rehabilitation Center
3242 Sutherland Avenue
Indianapolis, Indiana 46205

Herbert L. Pickell, Jr.
Executive Director
Deaf and Hard of Hearing Counseling Service
1648 East Central Street
Wichita, Kansas 67214

Gerald Pollard, Media Specialist
Southwest Regional Media Center for the Deaf
Box AW, University Park Branch
Las Cruces, New Mexico 88001

Bert Poss, Consultant
Deaf and Hard of Hearing
Texas Education Agency
Office of Vocational Rehabilitation
Austin, Texas 78711

Margaret Power, Principal Vocational Therapy Counselor
Colorado School for the Deaf and Blind
Kiowa and Institute
Colorado Springs, Colorado 80903

George Propp
Midwest Regional Media Center for the Deaf
University of Nebraska
426 Nebraska Hall
Lincoln, Nebraska 68504

Earl E. Roberts
Drafting Instructor
Michigan School for the Deaf
Flint, Michigan 48502

Robert J. Schmitt, Media Specialist
Southwest Regional Media Center for the Deaf
Box AW, University Park Branch
Las Cruces, New Mexico 88001

Ben M. Schowe, Jr.
Teacher - IMC Director
Ohio School for the Deaf
500 Morse Road
Columbus, Ohio 43214

Jean W. Sellner
1337 Lawrence Street
El Cerrito, California 94530

Frank D. Sheppard, Coordinator
Division of Vocational Rehabilitation
1808 West End, Room 1400
Nashville, Tennessee 37203

Lester Stanfill
Indiana School for the Deaf
Indianapolis, Indiana 46205

Ralph C. Stegall, Counselor
Division of Vocational Rehabilitation
Box 16
North Carolina School for the Deaf
Morganton, North Carolina 28655

Robert E. Stepp, Ph. D., Director
Midwest Regional Media Center for the Deaf
University of Nebraska
426 Nebraska Hall
Lincoln, Nebraska 68504

Larry G. Stewart
NTID
Rochester Institute of Technology
Rochester, New York 14614

Alan Sussman
New York University
New York, New York 10003

Elaine E. Szymoniak, Counselor
Speech and Hearing Therapist
Vocational Rehabilitation Evaluation
Center
1029 Des Moines Street
Des Moines, Iowa 50309

Julius M. Villemarette
Assistant Administrator
Delgado Vocational Rehabilitation Center
615 City Park Avenue
New Orleans, Louisiana 70119

Douglas O. Wells, Evaluator
Delgado Vocational Rehabilitation Center
615 City Park Avenue
New Orleans, Louisiana 70119

Boyce R. Williams, Chief
Communications Disorders Branch of
the Social and Rehabilitation Services
Washington, D. C. 20202

William Williams
NTID
Rochester Institute of Technology
Rochester, New York 14614

John C. Wilson, Ph. D., Director
Rehabilitation Services
Ohio Valley Goodwill Industries
Rehabilitation Center
10600 Springfield Pike
Cincinnati, Ohio 45246

William E. Woodrick, Director
RSA Orientation to Deafness
Program
Department of Special Education
and Rehabilitation
University of Tennessee
Knoxville, Tennessee 37916

Raymond Wyman, Ed. D.
Professor of Education
School of Education
University of Massachusetts
Amherst, Massachusetts 01002

Fred P. Yates, Jr.
Assistant Principal
Virginia School for the Deaf
and Blind
Staunton, Virginia 24401

Delmas Young, Supervising Teacher
Tennessee School for the Deaf
P. O. Box 886
Knoxville, Tennessee 37901